THE REVERIES OF THE SOLITARY WALKER,
BOTANICAL WRITINGS,
AND LETTER TO FRANQUIÈRES

JEAN-JACQUES ROUSSEAU

THE REVERIES OF THE SOLITARY WALKER, BOTANICAL WRITINGS, and LETTER TO FRANQUIÈRES

THE COLLECTED WRITINGS OF ROUSSEAU
Vol. 8

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FRONTISPIECE: Rousseau Botanising.
Eighteenth-century engraving. Artist unknown.

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Preface

Although Jean-Jacques Rousseau is a significant figure in the Western tradition, there is no standard edition of his major writings available in English. Unlike those of other thinkers of comparable stature, moreover, many of Rousseau's important works either have never been translated or have become unavailable. The present edition of the *Collected Writings of Rousseau* is intended to remedy this situation.

Our goal is to produce a series that can provide a standard reference for scholarship that is accessible to all those wishing to read broadly in the corpus of Rousseau's work. To this end, the translations seek to combine care and faithfulness to the original French text with readability in English. Although, as every translator knows, there are often passages where it is impossible to meet both of these criteria at the same time, readers of a thinker and writer of Rousseau's stature deserve texts that have not been deformed by the interpretive bias of translators or editors. Wherever possible, existing translations of high quality have been used, although in some cases the editors have felt minor revisions were necessary to maintain the accuracy and consistency of the English versions. Where there was no English translation (or none of sufficient quality), a new translation has been prepared.

Each text is supplemented by editorial notes that clarify Rousseau's references and citations or passages otherwise not intelligible. Although these notes do not provide as much detail as is found in the critical apparatus of the Pléiade edition of the *Œuvres complètes*, the English-speaking reader should nevertheless have in hand the basis for a more careful and comprehensive understanding of Rousseau than has hitherto been possible.

Volume 8 contains a revision of the translation by Charles E. Butterworth, the only English translation of *The Reveries of the Solitary Walker* to be based on Rousseau's manuscript. This translation corrects errors of transcription in the standard French editions. The volume also contains a translation of Rousseau's botanical writings by Alexandra Cook, the first English translation to be based on the critical French editions. The majority of letters on botany are translated here for the first time. Finally, the Letter to Franquières is presented in a new translation by Terence E. Marshall. In each case the translators are responsible for the notes.

Acknowledgments

It is a great pleasure to be able to thank again all those who first helped bring this translation to light two decades ago. A special expression of gratitude goes to Ann Charney Colmo and Mary Pollingue Nichols for their careful readings of multiple drafts and their ever helpful suggestions on how to render Rousseau's meaning and style. The original translation also profited from the criticism of Alan Seltzer and Terence Marshall, as well as from contributions too numerous to detail from my wife, Deborah. My sense of gratitude and of indebtedness to all of them has only increased with the passage of years.

The selfless courage of the young man to whom the work was first dedicated—my brother Billy—remains uppermost in my mind along with the hope that such valor will continue to inspire awe and wonder and that his sacrifice along with that of so many other patriot warriors will always be honored.

That this translation has remained in print is due in no small measure to the energy, good will, and dedication to publishing that so characterize James Hullett of the Hackett Publishing Company. He has also been exceptionally gracious about letting the University Press of New England reprint the Hackett translation. I am especially grateful for all these good deeds.

The translation as it appears here has been improved immensely by Chris Kelly's attentive eye to detail and enviable memory of parallel passages in Rousseau's many writings, passages that set particular points into sharper focus and permit recasting certain words or clauses to make the translation more readable and perhaps more faithful to Rousseau's intention. He has also helped clarify several notes. Finally, to Alexandra Cook, Jean Quentric, and Maroun Aouad, I am most grateful for helping identify the Abbé Rosier, whose needling note to Rousseau seems to have prompted the Fourth Walk.

C.B.

For assistance with various phases of this project I thank the following persons and organizations: the American Philosophical Society for a grant

to examine manuscripts in Neuchâtel, Switzerland in 1994, Maryse Surdez-Schmidt, archivist of the Bibliothèques publique et universitaire de Neuchâtel, for assistance in examining the manuscripts; the University of Chicago libraries, including Fritz Whitcomb of Crerar Library, and Sem Sutter and June Farris of Regenstein Library, for their help in tracking down hard-to-find sources; Michael Stieber of the Morton Arboretum, Lisle, IL, for assistance with names and definitions; the National Library of Agriculture, Beltsville, MD, Special Collections branch, for sending copies of manuscripts to New Zealand; the National Endowment for the Humanities for a summer seminar fellowship at Harvard University in 1997, and Victoria University of Wellington for a Faculty of Humanities and Social Sciences grant in 1998 to assist with the completion of the project. Phil Garnock-Jones, Professor of Plant Science, Victoria University of Wellington, and Elizabeth Edgar of Landcare Research, Lincoln, New Zealand, provided patient assistance and advice on botanical Latin and the niceties of plant nomenclature.

Special thanks are due to Gerald Sullivan for assistance of all sorts over the years; to Trudy King, manuscript typist, Colgate University, and most especially to Professor Peter F. Stevens of the University of Missouri–St. Louis and the Herbarium, Missouri Botanical Garden, who read and commented on the entire manuscript and offered advice and assistance well beyond the call of duty. Finally, I note that without the great scholarly achievements of R. A. Leigh's *Correspondance complète de Jean-Jacques Rousseau*, and F. A. Stafleu and R. S. Cowan's *Taxonomic Literature*, 2nd ed., this project would have taken much longer and would have been much more difficult to complete.

A.C.

I wish to express my gratitude to the Earhart Foundation for providing financial assistance toward the preparation of this edition, and particularly to the late Mademoiselle Claire Rosselet of the Bibliothèques de la Ville de Neuchâtel, Switzerland, for so kindly allowing me to examine, during the summers of 1974, 1975, and 1976, the manuscript copies of these letters for the purpose of comparing them with previously published French editions.

T.M.

I would like to thank Fredrica Carpenter for her invaluable assistance in the preparation of the final manuscript.

C.K.

Introduction

The works contained in this volume of the *Collected Writings of Rousseau* show great diversity of style, but are unified both chronologically and, to a large degree, thematically. They all date from the end of Rousseau's life during a period in which he had renounced the occupation of an author. His last major works published in his lifetime were the *Letters Written from the Mountain*, which appeared in 1764, and the *Dictionary of Music*, which was completed around the same time but published only in 1767. Although Rousseau's great autobiographical works, the *Confessions*, *Dialogues*, and *Reveries*, as well as important books like *On the Government of Poland* were all written during this later period, none of them were published until after his death. Thus Rousseau's public literary career ended less than fifteen years after it was launched with the *Discourse on the Sciences and the Arts*. The works collected in this volume provide ample testimony of Rousseau's continued interest in writing and philosophy even after he renounced publishing.

Rousseau and His Audiences

Because they were not written for immediate publication the works contained in this volume raise an interesting set of issues about the relations between Rousseau and his readers. Even though he had renounced publication, Rousseau knew from experience that any letter he sent or manuscript he showed to anyone would be widely circulated and possibly published with or without his permission. As early as 1755 Voltaire had asked for Rousseau's permission to publish a letter only after having made arrangements to do so and several of his shorter writings had been published without his permission after circulating in manuscript form. Because of his expectation of eventual publication Rousseau hardly ever wrote anything without considering possible public reaction. In sum, the fact that he could be confident that each of the works in this volume would be read by a wider audience gives them a fascinating double character. When he is addressing himself alone, a mother hoping to interest her child in botany, or a confused young man, he engages in a sort of dialogue that takes into consideration the particular needs of his interlocutor. At the

same time he is aware of those unidentifiable future readers who are observing this dialogue.

Of the works included in this volume, *The Reveries of the Solitary Walker* is the most famous, and it has long been regarded as one of the masterpieces of French literature.[1] Rousseau's apparent abandonment of his previous concern with an audience for his writing is one of the major explicit themes of the *Reveries*. This is proclaimed with the opening sentence, "I am now alone on earth, no longer having any brother, neighbor, friend, or society other than myself."[2] Rousseau presents himself as an unwilling outcast from all society who is attempting to turn his status as an outsider to account. He will devote the close of his life to reflecting on himself, and the record of these reflections will preserve them as an aid for engendering still more reflections. He himself, then, appears to be the sole true audience for the *Reveries*.

Although most of the "Walks" maintain this tone of solitary introspection, Rousseau partially edited the *Reveries* as if for publication. Accordingly, the solitary character of his reveries is problematic. Both the First and Second Walks are devoted to explaining his exile and showing its surprisingly benign effect on him. A part of this explanation consists in both linking the *Reveries* with and distinguishing them from Rousseau's other major autobiographical works, the *Confessions* and *Dialogues*. Rousseau explains that both of these works were written while he was extremely anxious about transmitting an accurate account of himself to future generations. The *Dialogues* in particular suggest that he believed that the future effect of his writings and his personal reputation were intimately connected. In the *Reveries*, however, Rousseau claims that he has accepted the futility of this enterprise and resigned himself to the fate of being misunderstood.

The *Confessions* also are very much marked by the search for a proper audience. Rousseau begins by saying that he will present this work on the day of the Last Judgment to be read to his fellows.[3] He prefaced readings he gave from the *Confessions* with a statement that he considered his listeners as his confessors.[4] Both of these statements emphasize the sincerity and openness he is bringing to his book and the responsibility of the readers (who potentially comprise the whole human race) to respond appropriately. *Rousseau Judge of Jean-Jacques: Dialogues* abandons almost all confidence in readers. Rousseau says that he is bewildered by the judgments made about him by the public and proposes to give an account of how he would have judged someone like himself if confronted by the same evidence.[5] In the course of the *Dialogues* he gives lessons on how to judge Jean-Jacques, the man and on how to read his writings. In short, the *Dia-*

logues could be regarded as an attempt to educate readers about how they should read the *Confessions*. This work represents a last-ditch effort to rescue his reputation from his enemies and thereby gain a hearing for his other writings. The *Dialogues* itself casts a good amount of doubt on the possibility of complete success in this enterprise: even the attentive reader portrayed there makes some errors in reading. In the *Reveries* Rousseau explicitly abandons both trust in readers and attempts to educate them. In this regard his final book can be regarded as a significant break from his earlier writings. Nevertheless, many of the discussions of the *Reveries* seem clearly directed at readers who are familiar with the major themes of his works.

The botanical writings present a less problematic relation to Rousseau's audience, or rather, group of audiences. The introduction and fragments of a botanical dictionary are clearly meant to follow the pattern of Rousseau's *Dictionary of Music*, providing a useful reference for students of the subject. Both of Rousseau's introductions follow the form of a critical review of the history of the discipline to be treated, which, moreover, argues for a particular approach to the subject matter.[6] In the *Introduction* to the botanical *Dictionary* Rousseau argues explicitly, even polemically, for the superiority of the Linnaean system. Rousseau wrote most of the letters on botany to fellow botanists as informal, private communications about their common interest. The most structured of these private letters are the eight letters addressed to Mme. Madeleine-Catherine Delessert, which amount to an introductory course in botany for a mother to use with her young daughter.[7] These letters, not well known today, were posthumously assembled by Rousseau's editors in various editions; they were transmitted to readers throughout late-eighteenth- and early-nineteenth-century Europe. In 1785 Rousseau's eight letters on botany to Mme. Delessert and the Introduction were translated into English by the Reverend Thomas Martyn (1735–1825), Regius professor of botany at Cambridge.[8] Martyn's translation played an enormous role in popularizing botany and in making Rousseau's botanical interests widely known; Martyn's translation, later published with illustrations, remained in print well into the nineteenth century. Thomas Jefferson owned a copy of the first edition. Martyn expanded Rousseau's text with twenty-four letters expounding the Linnaean sexual system of classification. The botanical writings of Rousseau were soon translated, either directly from French, or from the Martyn edition, into several European languages, including Danish, Portuguese, and Russian. Transformed into public works, these various collections of Rousseau's botanical writings contributed to a significant tradition of epistolary popularization of scientific ideas.[9] They present Rousseau's

view of nature in its most accessible form and did much to establish his enduring image as a lover of nature.

The Letter to Franquières provides interest of another sort. Although it has been published numerous times, its addressee remained something of a mystery for a long time. Finally R. A. Leigh identified Franquières as a young nobleman from the Dauphiné who was twenty-four years old when he wrote to Rousseau in search of guidance. Although his original letter to Rousseau has not been preserved, Rousseau's response together with what we know about his correspondent make it clear that Franquières was an admirer of both Rousseau and of thinkers such as Voltaire and Diderot. The young adherent of reason was evidently puzzled by the support for religion he found in Rousseau's writings. Rousseau's letter to him is a sort of guide for someone who has been exposed to Enlightenment philosophy with its critique of traditional religion and is perplexed about the adequacy of this philosophy as a support for a moral life and about how a thinker such as Rousseau can continue to argue for the importance of religion.

The widely varying styles of these works result in large part from this diversity of ostensible audiences. They are, however, concerned with overlapping subjects. The *Reveries* provides the thematic unity of the volume. Especially in the Third Walk, but also in others, Rousseau develops his treatment of the limits of human reason, which is a major theme of the Letter to Franquières. The understanding of reason presented there is the foundation for the Seventh Walk, in which Rousseau gives his most extensive account of the reasons for his own interest in botany. Considered as a group these works provide Rousseau's most intimate and his last reflections on what is involved in attempting to understand nature.

The Limits of Reason and Religion

Rousseau provides us with accounts of his intellectual development in numerous places in his writings. In fact, in the *Letter to Beaumont* he says that it is his "ordinary method" to answer critics by giving the history of his ideas.[10] The most famous of these accounts are descriptions of the sudden transformation he underwent on the road to Vincennes upon reading the question posed for a contest, "Has the progress of the sciences and arts tended to purify morals?" In the version of this story that appears in the *Confessions*, Rousseau says, "At the moment of that reading I saw another universe and I became another man."[11] In this account an ambitious, but confused, minor intellectual was suddenly transformed into a great thinker obsessed with truth and justice. The *Confessions* is not very explicit

about the chain of thought that led up to this transformation, presenting it almost as an inexplicable revelation.

In other contexts, however, without denying the importance of his "illumination" on the road to Vincennes, Rousseau emphasizes a prolonged period of doubt in which he wrestled with fundamental issues posed by his exposure to philosophy. Sometimes he places this period early in his life and sometimes in the years following the illumination. For example, in the "Profession of Faith of the Savoyard Vicar" Rousseau depicts himself as a very young man whose doubts are assuaged, if not resolved, by a priest who had earlier undergone a similar period of doubt. In both the *Reveries* and the Letter to Franquières Rousseau gives accounts of this same sort of prolonged internal debate and suggests that his efforts to resolve it were inspired by the illumination.[12] He presents a situation very much parallel to his own in a fragmentary work, the so-called "Morceau allégorique." There Rousseau describes someone whom he describes as "the first man tempted to philosophize" who overcomes his perplexity over causality only by coming to terms with the limits of his reason.[13] While each of these descriptions is of the same general intellectual dilemma, there are significant variations in the different accounts.

When considered in its context the account in the *Reveries* helps shed light on some of the variations in the similar accounts elsewhere and on the one in the Letter to Franquières in particular. Rousseau concludes the Second Walk by discussing the relation between his rejection by other people and God's will. The Third Walk broadens this discussion to an account of how he arrived at his religious views and in particular the religious teaching he had presented most eloquently in the "Profession of Faith of the Savoyard Vicar" in *Emile*. Both here and in the Letter to Franquières Rousseau indicates that his reflection on these matters belongs in the past and that in the present he is content to retain the opinions he arrived at when he was at the height of his intellectual powers.[14] At around the age of forty (shortly after the illumination on the road to Vincennes) he had undertaken to settle the doubts that had been instilled in him by his exposure to philosophy. He concedes that he was not able to answer all the difficulties that had been posed to him and is somewhat vague about the precise nature of his conclusions, but insists that these conclusions have sustained and continue to sustain him.

This discussion is followed by a lengthy meditation on lying and telling the truth in the Fourth Walk.[15] This discussion is explicitly concerned with what Rousseau owes other people as well as what he owes himself. Thus a major theme of this section of the *Reveries* is the relation between a commitment to truth on the one hand and public responsibility in addressing

moral questions of the sort that are involved in religion on the other. The argument he develops here is a complex one, but clearly suggests that in public discussion of moral issues strict truth must be subordinated to certain moral considerations, or as Rousseau says fictions may be used "to wrap useful truths in easily perceived and pleasing forms."[16] While Rousseau's discussions are framed in terms of his self-examination, they have a clear relevance to his general practice as a writer. They indicate why he is rather more affirmative about specific doctrines when he is addressing himself to a particular audience than he is when he is simply giving an account of his own reasoning.

This desire to reconcile a commitment to truth and moral responsibility guides Rousseau in the Letter to Franquières. The Letter's account of Rousseau's wrestling with the conflict between religion and philosophic systems is quite similar in many respects to the account given in the Third Walk. Differences between the two descriptions, such as the denial that he ever experienced prolonged doubt in the Letter and assertion that doubt led him close to despair in the Walk,[17] are clearly related to Rousseau's treatment of a very specific correspondent.

The importance of Rousseau's Letter to Franquières is indicated by the fact that he preserved it to be included in his collected writings. Apparently he saw Franquières as the representative of one sort of reader he hoped to influence. In addition, his response is a noteworthy example of the many letters Rousseau wrote to people unknown to him in response to their requests for guidance. As Jean Starobinski has pointed out, by the time Rousseau went into exile from France after the publication of *Emile* and the *Social Contract*, many readers regarded him as the one writer who had a profoundly personal effect on them.[18] The persecution Rousseau was suffering made him an even more attractive figure and he received many letters from readers who believed that he alone could understand their problems and solve them. As years went by Rousseau became suspicious of these correspondents whose true motives were unknown to him, but in numerous instances he responded with acute analyses of the problems tormenting these writers, practicing what Starobinski calls "epistolary therapy."

Although Franquières's letter to Rousseau has been lost, it is possible to use Rousseau's response to reconstruct with some precision the dilemma in which the young correspondent found himself. Rousseau refers to his interlocutor both as being in a persistent state of doubt about fundamental issues and as a convinced materialist influenced by Locke and Diderot.[19] His leaning toward materialism is connected with his doubts about religion. Franquières evidently argued that the existence of God is irreconcilable with the observable fact of evil in the world. Moreover, he clearly

claimed that religious attempts to account for evil exacerbated the problem by engendering fanaticism and superstition. Instead of looking to religion as a necessary support for morality, he appeals to the "divine simulacrum" of the idea of virtue as a sufficient motive for virtuous behavior. In sum, Franquières is an almost convinced adherent of reasonably common and fairly radical enlightenment beliefs. He sees traditional religion as the source of evil and sees materialist philosophy as both a weapon against religious doctrine and a potential support of virtue. That his persistent doubt has left him not quite convinced is indicated by the fact that he wrote to Rousseau for advice.

Rousseau responds to Franquières's combination of disdain for religion, inclination toward materialism, and moralism in several stages. He begins by addressing his correspondent's persistent doubt, arguing that an acknowledgment of the limitations of human reason need not lead to radical skepticism and pointing out that any degree of skepticism is incompatible with a simultaneous dogmatic commitment to materialism. He proceeds to argue that Franquières and his philosophic guides have misunderstood the problem of evil and that any belief in the power of the mere idea of virtue is at odds with his professed materialism. Finally, he concludes with a reinterpretation of Jesus that makes him a worthy rival of the Socrates admired by Franquières. In sum, Rousseau attempts to redefine the central issue at stake, to expose an inconsistency in Franquières's position and to rehabilitate the reputation of religion. His response is based on a recognition that, at their root, his young correspondent's concerns are moral rather than simply epistemological issues.

Franquières seems to have argued that the lack of certainty we have about ultimate causes is an argument against religion and, consequently, in favor of materialism. The ground of his argument is a moral objection to any religion that demands faith in God without being able to show that God's existence is evident and therefore damns men for an unavoidable ignorance. Rousseau rescues religion from this moral objection by taking the radical step of denying that belief is necessary for salvation. Moreover, he reverses Franquières's position by arguing that it is materialist philosophy, rather than religion, that demands of its adherents a certainty it is unable to provide. Materialism promises to explain everything in terms of matter and the laws of motion, but is unable to deliver on this promise when asked to show "clearly and through the senses the purely material generation of the first intelligent being."[20] In the end Rousseau does not argue that he can conclusively demonstrate an alternative to materialism. He argues only that, once the moral argument has been disposed of, plausibility does not favor Franquières's position.

Rousseau then turns directly to the problem of evil. Once again he claims that Franquières's attack on religion on moral grounds is misguided. He argues that particular physical evils such as death and pain are the necessary price of life and that, by nature, the price is small. Restating what can be regarded as the fundamental principle of his thought, he argues that humans, rather than nature or God, are responsible for both most physical and psychological suffering and the existence of moral evil. Refusing to offer proofs for this position, which he has treated in numerous writings unread by Franquières,[21] Rousseau appeals to his own authority as an expert on the significance of undeserved suffering. He compounds his radical reformulation of religion by suggesting that God is exonerated from responsibility for evil because he is not omnipotent: matter is resistant to divine control.

Conceding that superstition and fanaticism are the causes of harm as Franquières had insisted, Rousseau suggests that Franquières's "simulacrum of virtue" is not an adequate substitute for religious belief as a support of virtue. He points out that an idea of virtue that is lovable cannot easily be explained in purely materialist terms, but does not quite deny that such an idea might exist. Instead he argues that the idea of virtue is only a metaphysical entity that can have little power in the face of the physical and emotional temptations that might be encountered by a sensitive heart. Rousseau argues that religious belief can help tip the balance in favor of virtue in such a case, by offering God as a witness to the successful struggle for virtue even more than as a source of a threat of punishment for sin. Thus, while he has argued that in principle religious belief is not necessary for salvation, Rousseau does claim that in practice it may be a necessary support for morality. Once again he has not provided a conclusive demonstration, but appeals to Franquières's attachment to morality.

Rousseau concludes his letter by making his defense of religion against philosophy concrete by means of a comparison of Jesus to the Socrates preferred by his correspondent. Rousseau identifies himself as an admirer of both of these figures and attempts to raise Franquières's opinion of the former by presenting him in purely human terms as a transpolitical moral teacher who performed no miracles.[22] He concedes that parts of the Gospel are simply unbelievable and attributes this to their authors rather than their subject.

In sum, Rousseau responds to his young correspondent by deflecting, rather than engaging, the philosophic element of his concerns. He attacks the vanity of philosophy and endorses an alternative approach in which the reasonable and modest thinker stops "and does not touch the veil" concealing ultimate truths.[23] Having deflected philosophic issues, Rous-

seau engages the moral issues underlying Franquières's perplexity and offers him a religious view in which neither miracles, nor creation, nor divine omnipotence play a role and in which belief is subordinated to morality. This letter is a noteworthy illustration of Rousseau's concern with the relation between truth and morality outlined in the Fourth Walk of the *Reveries*.

The Limits of Reason and the Study of Nature

A common element in the treatment of reason in the Third Walk and in the Letter to Franquières (and indeed in Rousseau's other treatments of similar issues) is their insistence on the limitations on the reasoning powers of particular individuals. Rousseau's insistence that settling certain ultimate metaphysical questions is beyond the competence of most or even all humans could lead in several directions. As we have seen, Rousseau insists that it need not lead in the direction of a radical skepticism about all religious and moral issues. The abandonment of the pursuit for final causes could, however, lead in the direction of subordinating reason to instrumental issues involved in the technological control of nature and the satisfaction of unreasonable human desires. Both the *Reveries* and the botanical writings suggest an alternative direction.

In a sense it could be said that these writings show what sort of life follows from the adoption of Rousseau's principles, although this statement requires one important qualification. The political themes that dominate Rousseau's earlier works are relatively absent from these. There are two reasons for this. First, in the *Reveries* Rousseau excuses his idle existence (including his devotion to botany) by referring to his persecution. He has become such an outcast that it is almost impossible for him to act effectively out of any motive of public-spiritedness. Second, this position not only prevents him from acting, but also allows him to indulge his natural impulses. The first of these considerations suggests that a life devoted to civic duty is an obligation from which we are excused only by rare circumstances. The second allows for the possibility that there might be a purely private life offering satisfactions unavailable to good citizens.

The relation between Rousseau's indulgence of his natural inclinations and virtue is the theme of the Sixth Walk. Here Rousseau enlarges on one of the persistent themes of his work: the meaning of natural goodness. As he was always very careful to specify, his claim that men are naturally good does not mean that they are virtuous. It means only that their natural inclinations do not lead them to desire harm to their fellows. Virtue, on the other hand, requires the ability to overcome inclinations and develops

only in society.[24] While insisting that his own impulses are good and, furthermore, have frequently led him to perform charitable works, Rousseau admits that unpleasantness has frequently made him avoid constraining obligations. After reflecting on this, he concludes, "This is what greatly modifies the opinion I long had of my own virtue; for there is none at all in following our inclinations and in giving ourselves the pleasure of doing good when they lead us to do so."[25] Just as he does in the Letter to Franquières, Rousseau argues here that natural inclination is not a sufficient support for virtue, even though natural inclinations are good in that they seldom require harming others and frequently lead to helping them. In sum, the sort of life explored here is one of independence from political life and the duties it imposes. Rousseau clearly presents this sort of life as pleasant, but justifies it in his own case only by the exile in which he finds himself.

In the Fifth through the Ninth Walks Rousseau explores theme of his own natural goodness and, in particular, the role of his developed rational faculties in threatening or maintaining it. The Eighth Walk stresses the problems these faculties cause in the form of anxiety stemming from foresight and especially amour-propre, which makes him concerned with the opinions of other people. Both foresight and amour-propre depend on the ability to imagine oneself from the outside so to speak, either in terms of one's future position or in terms of comparison with other people. The development of these rational faculties compromises one's naturalness by bringing about artificial passions and desires.

At best, reason, in the form of a correct understanding of the workings of these passions, can help to keep them under control. Rousseau describes the rational limitation of reason by saying "I understood that I had to submit to [my fate] without reasoning and without struggling, because that would be useless."[26] The normal impulse of reason would be to struggle against necessity, but Rousseau's chastened understanding works to control this impulse. This use of reason is instrumental to happiness, but it is not identical to it. It merely preserves or reestablishes conditions in which happiness is possible.

In the Fifth and Seventh Walks Rousseau explores what could be called his description of what constitutes happiness. Paradoxically, Rousseau finds happiness through the practice of a science—the science of botany. Thus, even while he comments on the futility of such an enterprise, saying, "I have never seen that such knowledge contributes to life's happiness,"[27] in this case science gives pleasure and distracts him from his troubles rather than principally instructing him. Botany plays an important role in both of these walks. In the former Rousseau discusses his brief so-

journ on St. Peter's Island in the middle of Lake Bienne. This sojourn lasted about six weeks during 1765, during the height of the controversies over Rousseau's writings. While the account of happiness in this walk has some complications,[28] its essence is found in Rousseau's question and answer, "What do we enjoy in such a situation? Nothing external to ourselves, nothing if not ourselves and our own existence."[29] Reasoning makes only a partial contribution to this enjoyment. For example, when describing his reveries while sitting on the lakeshore Rousseau says, "From time to time some weak and short reflection about the instability of things in this world arose, an image brought on by the surface of the water."[30] This reflection consists of finding in the play of the water a pleasing metaphor for the flux Rousseau sees in the world as a whole. This fleeting poetic reflection plays a small part in this experience.[31]

Botany

In the instances discussed so far reasoning—especially scientific reasoning—plays a subordinate role either as a partial antidote to the problems caused by reason itself or as a part of poetic creativity. In contrast, the description of botany in the Seventh Walk more closely resembles traditional accounts of the satisfaction stemming from rational contemplation. Both here and in the botanical writings Rousseau distinguishes genuine botany from knowledge pursued for the sake of mere utility. In the opening line of the introduction to the *Botanical Dictionary* Rousseau announces, "The first misfortune of Botany is to have been regarded since its birth as a part of Medicine. As a result people have thought only to find or attribute virtues to plants, and have neglected the plants themselves."[32] Rousseau endorses studying "the plants themselves" rather than ignoring them or breaking them down in order to arrive at their useful (e.g., medical) properties.

Thus botany as Rousseau envisions it avoids a purely utilitarian, reductionist approach; it likewise avoids an approach focused on final causes. His botany focuses, rather, on the forms and life processes of living plants. These forms comprise in the first instance the physical structures of the plant, in particular the organs and the process of reproduction, or what Rousseau and other botanists of the period refer to as "fructification."[33] It is only after careful and concerted study of plant structure, including many exercises in dissection that Rousseau is prepared to step back and take a more general view of the purposes for which plant life is organized.

Rousseau's accounts of the satisfaction involved in this botanical contemplation of physical forms varies depending on whether he is address-

ing a correspondent or simply discussing his own pleasure. In the correspondence he recommends plant study for people of all ages as a distraction from potentially harmful passions and because it "brings to the soul a nourishment that profits it by filling it with the most worthy object of its contemplation."[34] In the *Reveries* and the *Confessions*, where he is concerned only with its attraction to himself, Rousseau distinguishes botanizing from thinking deeply, which he finds "painful and charmless."[35] Botanizing is both pleasant and charming because it offers endless variation combined with the constancy of structure. The botanist can examine this combination in a detailed and systematic way without becoming absorbed in the sort of unfounded metaphysical speculation about final causes that Rousseau regularly attacks. According to his more modest position, a mere human being can know only particular ends, even if he or she is convinced that the harmony, unity, and "chain of relations" in nature point toward an intelligence, a designer, who created the world for an end, however unknowable.

In the decades after his death one of Rousseau's principal claims to fame was his promotion of botany for nonspecialists.[36] In 1781 the *Gelehrte Anzeigen* of Göttingen heralded the appearance of Rousseau's botanical writings, "we cannot recall having read a more agreeable and at the same time such a penetrating botanical author. The more so, as the definitions in the Fragments of the Dictionary are models of conceptual exactitude and precision of expression."[37] In June 1782 Goethe likewise recommended them, "In Rousseau's works there are the most delightful letters concerning botany, in which he explains this science to a lady in the most understandable and elegant way. It is truly a model for how to teach and a supplement to *Emile*."[38] Mme. Roland preferred Rousseau to any other botanical author, saying, "What a difference from all these preceptors to the simple and sublime Jean-Jacques! Without adopting any system, he makes one follow nature and puts it into one's grasp subsequently to choose with profit the one that will please the most."[39] Yet the works so lavishly praised are now virtually unknown, particularly in the English-speaking world.

The importance of these works does not stem from any significant novelty they introduce into the science of botany. Rousseau's most important contribution was to the teaching of botany. While outdoor botanical instruction had a long history, many in the eighteenth century focused on their natural history cabinets rather than on living plant specimens. Thus Rousseau notes that Linnaeus "has studied [botany] too much in herbaria and in gardens and not enough in nature itself."[40] Rousseau was instrumental in shifting the locus of botanical study from the herbarium back

to the out-of-doors; he likewise opened botanical instruction to women and children.

This reflects the pedagogical approach in *Emile*, where Rousseau holds that true philosophers must study nature not in "salons" or in "museums," but on foot, as did Thales, Plato, and Pythagoras. The "whole earth" is Emile's "museum," arranged "in very beautiful order" by "the naturalist in charge."[41] Rousseau placed the study of nature at the center of his philosophic project, as Claude Lévi-Strauss points out: "if it is true that nature has rejected man and that society persists in oppressing him, man can at least reverse the poles of the dilemma to his benefit and *seek the society of nature to meditate there on the nature of society*. Here it seems to me, is the indissoluble message of *Le Contrat Social*, of [the] *Lettres sur la Botanique* and of *Les Rêveries*."[42] Botany forms a prominent part of Rousseau's plan for a new education based on the study of facts, not signs. Children should learn it not as a language or system of representations, therefore, but as "a study of observations and facts truly worthy of a naturalist."[43] This education lays the foundation for a new moral life. Nature study of "pure curiosity" nourishes the soul, calms turbulent passions, elevates human sights to the "Author" of nature, and shows nature's unvarnished truth and order in opposition to "men and their injustices.[44]

Rousseau's nature study opposes the Baconian interrogation of nature on the rack. Bacon's object is to make nature serve "the benefit and use of life;"[45] while Rousseau's object is to reveal the antithesis of social desire and political authority. Botany provides the means to do this only if studied without regard to material benefit, reputation, or amour-propre, a point Rousseau makes with particular force in the Seventh Walk.[46] For Rousseau botany is therefore not only or merely a science; because it "brings to the soul a nourishment,"[47] the principles of this science should be disseminated to and understood by lay persons, not just by experts. Rousseau's pedagogical botany constitutes virtually the first attempt to fill a significant gap in eighteenth-century botanical literature. Other botanists showed little interest in writing elementary works, so Rousseau began the task of making botany accessible and appealing.

Botany occupied Rousseau during the last fifteen years of his life. Rather than being the foundation of the understanding of nature outlined in his earlier writings, interest in botanical science was the outcome of Rousseau's mature reflections. He began to study it after fleeing from France for western Switzerland following the condemnation of *Emile* in 1762. In 1763 he made the acquaintance of Dr. Jean-Antoine d'Ivernois, an expert on the local flora, who taught Rousseau the rudiments of Linnaean classification. Following this introduction to a science he had

previously belittled as "a sort of Apothecary's study,"[48] Rousseau organized botanizing expeditions, collected plant samples, compiled herbaria, acquired an extensive library, and expounded principles of botany in didactic works.

Rousseau did not pursue botany in a vacuum; it was one of the most important eighteenth-century natural sciences, enjoying significant recognition in the academies and botanical gardens as both a theoretical and practical enterprise. Botanical research enjoyed particular prestige in the colonizing states, including France, due to the prospects of profitable intercontinental plant transfers. Botanical institutions developed a pivotal role in the identification, propagation, and exploitation of useful plants.[49] Of particular interest for Rousseau's work is the *Jardin Royal des Plantes Médicinales* in Paris, also known as the Jardin du Roi. Founded by the king's physician in 1626 as a place to propagate medicinal plants, in the early eighteenth century its purposes included theoretical research.[50] Rousseau drew on the work of these institutions; he also argued against practical aspects of their research.

Eighteenth-century botany's concern with nomenclature and classification stemmed from the substantial practical problems resulting from Europeans' encounter with new plants from all over the world from the sixteenth century onward. While late-medieval herbals mention between 500 and 1,000 plant species, John Ray's *Methodus plantarum nova* of 1682 refers to 18,000.[51] Europeans roamed far afield on the Baconian search for useful knowledge. The first *Endeavour* voyage of James Cook (1768–1771), commissioned by the Royal Society to observe the transit of the planet Venus, exemplified this quest, returning from Tahiti, New Zealand, and Australia with 1,300 new species and 110 new genera.[52] Given the complexity of recognizing legitimate distinctions, the task of naming, organizing, and using these plants was hardly a simple one.[53] Rousseau, like "all erudite Europe," followed such voyages with interest: "I learn that animated by his success [Daniel Solander] is going to brave new perils in order to extend the inventory of riches of the human species. How happy he is thus to be able to make the circumnavigation of the globe for the profit and instruction of our other faint-hearted homebodies. . . . O great and worthy enterprise! What would have I not given to be able to follow in his footsteps?"[54] Rousseau was well acquainted, therefore, with the practical issues attendant on the importation, study, and cultivation of non-Euoprean plants, which he somewhat pejoratively characterized as "exotic botany";[55] he suggested to his correspondents that he preferred studying local flora to that of "the Indies."[56] Nonetheless Rousseau participated in "exotic botany," planting Caribbean okra in France, visiting bo-

tanic gardens full of imported species, and studying works on South American trees.[57]

The theoretical concerns of eighteenth-century botany were largely epistemological. The most vexing problem for taxonomic botanists of the early modern, pre-Linnaean period had been "that of finding diagnostic criteria that were at once natural and in practice possible to employ."[58] Beginning with Andrea Cesalpino (1519–1603), botanists had explored the flower as the basis for classification.[59] The Linnaean system of classification achieved a synthesis of these efforts, thereby providing a temporary answer to the practical aspect of the taxonomic problem, for it was relatively easy to learn and employ. Linnaean binomial names, as Rousseau predicted, won the day, but matters were less clear-cut for the Linnaean system of classification. It was readily apparent that the sexual system united species with no real affinity to each other except the number of stamens or pistils. Linnaeus himself concurred in this criticism, acknowledging the artificiality of his system.[60] The search for systems of names and tables of knowledge continued unabated, and by the late eighteenth century, "we find the whole scientific community occupied in developing nomenclature and terminology appropriate for each discipline."[61]

France's leading naturalist, Georges Louis Leclerc, comte de Buffon (1707–1788), provided "[t]he exemplary 18th-century critique of Linnaeus."[62] As *intendant* of the Jardin du Roi from 1739 to 1788 Buffon opposed Linnaean systematics, preferring other systems of classification, such as that of Bernard de Jussieu. Jussieu's so-called "natural" system serves as the taxonomic basis for Rousseau's eight letters on botany and is featured in the Dictionary.[63]

Buffon's collaborator, Louis-Jean-Marie Daubenton (1716–1800), engaged in thinly veiled criticism of the Linnaean system in the *Encyclopédie*: "There are in plants no parts that appear in every species. . . . Nevertheless it is on the basis of the reproductive organs that the most vaunted systems have been established. . . ."[64] Daubenton was vindicated: "the Linnaean system as [the] table of contents [of the book of nature] was a failure, even when detailed descriptions were provided."[65] Rousseau's own view of nomenclature is nuanced. "It is true," he writes, "that names are arbitrary, that the knowledge of plants does not necessarily depend at all on that of nomenclature, and that it is easy to assume that an intelligent man could become an excellent Botanist even if he did not know a single plant by name." On the other hand, he argues "that a lone man, without books and without any assistance from communicated enlightenment, could . . . succeed at becoming [even] a very mediocre Botanist—this is a ridiculous assertion and an impossible enterprise to execute."[66] Names facilitate com-

munication and retention of information, but they are also arbitrary signs. Rousseau shares Daubenton's view that knowledge of nomenclature should not be mistaken for knowledge of plants.

Encountering these epistemological dilemmas, Rousseau trod a middle way. On purely practical grounds he adopted Linnaean names and often used the sexual system of classification; he praised the achievements of Linnaeus, while recognizing his limitations. At the same time he actively explored an alternative method of plant classification, the so-called "natural" method, developed over the course of several decades by Bernard and Antoine-Laurent de Jussieu (uncle and nephew) at the eighteenth-century Jardin du Roi; this system was known to Rousseau through his studies with the Jussieus. In his *Genera plantarum* of 1789 Antoine-Laurent de Jussieu classified plants into one hundred families by reference to a number of features, including cotyledon number. Jussieu's codification of the system of plant families has "been the backbone of botanical classification ever since."[67] This method differed markedly from the Linnaean sexual system, which considered only the position and number of the reproductive organs. Significantly, the natural family system of the Jussieus, not the Linnaean system, forms the taxonomic basis for the eight letters on botany. Hence, Thomas Martyn elided and even misrepresented this aspect of Rousseau's work in this 1785 translation by adding twenty-four letters expounding the Linnaean system.

Rousseau's botanical writings influenced Goethe in the early 1780s, as the German poet and Privy Councillor was developing his life-long interest in nature study. Goethe immediately recognized the significance of Rousseau's letters to Mme. Delessert, his unfinished *Dictionary*, and his botanical correspondence. Goethe attributed to Rousseau the recognition of a "fundamental principle" or *Grundgesetz* in plants; this principle is metamorphosis, a concept central to Goethe's natural philosophy.[68] In revolutionary France natural history, most especially botany, was privileged among the sciences as contributing to the cultivation of the new republican person. Proponents of Rousseau's theories advocated the study of botany and agriculture as uniquely suited to producing patriotic and useful citizens.[69]

Taken together, the texts on botany collected in this volume display Rousseau's understanding of this science and shed light on the role the study of nature plays in his philosophic system. As Goethe indicated, Rousseau was no ordinary dilettante, but was steeped in the botanical literature of his time.

Conclusion

These texts mainly written in the last ten years of Rousseau's life show both his continued interest in the major issues he addressed when he was a publishing author and the remarkable variety of literary forms he used in differing circumstances. In particular they show his attentiveness to the needs of the audience he is addressing. When writing to a young man in search of guidance about religious and philosophical matters he says subtly different things than he says when writing about the same things in the *Reveries*. Similarly, he adapts his treatment of botany to his purpose of popularization or to his account of his own happiness. It is a constant feature of Rousseau's writing that, while the underlying understanding remains the same, its form of presentation is constantly shifting.

Note on the Text

The standard French versions of the majority of texts found in this volume can be found in the *Œuvres complètes* (Paris: Bibliothèque de la Pléiade, 1959–1995). The *Reveries* can be found in Volume I and the botanical writings and Letter to Franquières can be found in Volume IV. The additional letters on botany can be found in R. A. Leigh's edition of the *Correspondance complète*. The translators have consulted the original manuscripts of most of the material in question. In the case of the *Reveries* this has led to some significant departures from the Pléiade version. These departures have been indicated in the text and, in the case of the *Reveries*, elaboration can be found in the original editions of the Butterworth translation. In the various letters on botany, we have preserved Rousseau's idiosyncratic spelling, orthography, and punctuation whenever possible because (1) spelling and other orthographic conventions were not yet firmly established in French, and (2) such details convey both the flavor of Rousseau's language and the somewhat informal character of much of this work.

Rousseau's literary executors, Pierre-Alexandre Du Peyrou and Paul Moultou, assembled the first major collection of Rousseau's letters on botany in the posthumous edition of Rousseau's works published in Geneva from 1781 to 1782. While Rousseau may have thought of collecting them into single work, to our knowledge he left no explicit instructions in this regard, and subsequent editors and translators have selected those letters they deemed most worthy of inclusion. Presented here for the first time are (1) letters never before translated into English (e.g., those to Malesherbes, the Duchess of Portland, and Latourette); and (2) letters never before featured in any previous edition of Rousseau's botanical writings,

including those addressed to Pierre Guy, Marc-Michel Rey, and André Thouin. The translation of the letters is based on Leigh's *Correspondance complète*. For the *Dictionary* and *Introduction* we have used the version first published in Geneva in 1782 from a manuscript that was available to the editors, but that is no longer extant. We have also consulted Philippe Godet and Maurice Boy de la Tour's 1911 *Lettres inédites de Jean-Jacques Rousseau*, which for the first time published the eight letters in their entirety.

Two prior translations of parts of these writings have been published. That of Thomas Martyn in 1785 (discussed above, p. xiii) translated only the *Introduction* and eight letters to Mme Delessert (see Martyn). The 1979 translation by Kate Ottevanger (*Botany: A Study of Pure Curiosity* [London: Michael Joseph]) provided the eight letters and a truncated version of the *Dictionary*, without the *Introduction*. Neither of these translations published any of the other correspondence included in this edition.

Plant names are translated in the vernacular where they are vernacular in the original; Latin names are preserved in the text and updated in the notes when subsequent nomenclatural revision makes this necessary. Our main authorities for this purpose are *Flora Europaea*, first edition, and Jackson and Hooker's *Index Kewensis*. Absolute certainty with respect to Rousseau's identifications of plant specimens is not possible without having access to his herbaria, some of which have been destroyed or lost.

Christopher Kelly and Alexandra Cook

REVERIES OF THE SOLITARY WALKER

First Walk

I am now alone on earth, no longer having any brother, neighbor, friend, or society other than myself. The most sociable and the most loving of humans has been proscribed from society by a unanimous agreement. In the refinements of their hatred, they have sought the torment which would be cruelest to my sensitive soul and have violently broken all the ties which attached me to them. I would have loved men in spite of themselves. Only by ceasing to be humane, have they been able to slip away from my affection. They are now strangers, unknowns, in short, nonentities to me—because that is what they wanted. But I, detached from them and from everything, what am I? That is what remains for me to seek. Unfortunately, that inquiry must be preceded by a glance at my position. This is an idea I must necessarily follow out in order to get from them to me.

Although I have been in this curious position for fifteen years and more,[1] it still seems like a dream to me. I still imagine that I am being tormented by indigestion, that I am sleeping badly, and that I am going to wake up fully relieved of my pain and find myself once again with my friends. No doubt about it, I must have unwittingly made a jump from wakefulness to sleep or rather from life to death. Dragged, I know not how, out of the order of things, I have seen myself cast into an incomprehensible chaos where I distinguish nothing at all; and the more I think about my present situation the less I can understand where I am.

And how could I have foreseen the destiny which awaited me? How can I conceive of it even today when I am given up to it? Could I in my good sense have supposed that one day I, the same man that I was, the same that I still am, would—without the slightest doubt—pass for and be taken as a monster, a poisoner, an assassin; that I would become the horror of the human race, the plaything of the rabble; that the only greeting passersby would give me would be to spit on me; that an entire generation would, by a unanimous agreement, find delight in burying me alive? When this strange revolution occurred, taken unprepared, I was at first overwhelmed by it. My agitation, my indignation, plunged me into a delirium which has taken no less than ten years to be calmed;[2] and having stumbled in the interval from one error to another, from one mistake to another,

from one foolish act to another, my imprudent actions furnished the masters of my fate all the tools they have skillfully utilized to make it irreversible.

I struggled for a long time as violently as I did in vain. Without cleverness, without craft, without dissimulation, without prudence, candid, open, impatient, carried away, I only entangled myself more by struggling and incessantly gave them new holds they have been careful not to neglect. Finally, feeling that all my efforts were useless and that I was tormenting myself to no avail, I took the only course which remained—that of submitting to my fate without railing against necessity any longer. I have found compensation for all my hurts in this resignation through the tranquility it provides me, tranquility which could not be united with the continual toil of a resistance as painful as it was fruitless.

Another thing has contributed to this tranquility. Among all the refinements of their hatred, my persecutors omitted one which their animosity made them forget: that was to increase its effects so gradually that they could incessantly sustain and renew my sufferings by forever hurting me in a new way. If they had been clever enough to leave me some glimmer of hope, they would still have that hold on me. They would still be able to make me their plaything by means of some false lure and then break my heart by a continually new torment that would frustrate my expectations. But they exhausted all their resources in advance; in leaving me nothing, they deprived themselves of everything. The defamation, depression, derision, and disgrace with which they have covered me are no more susceptible of being increased than mollified; they are as incapable of aggravating them as I am of escaping them. They were in such a hurry to bring the toll of my misery to its peak that all human power aided by all the tricks of Hell could add nothing more to it. Physical suffering itself, instead of increasing my torments, would bring diversion from them. By forcing screams from me, it would perhaps spare me groans; and the rending of my body would stay the rending of my heart.

What do I still have to fear from them, since everything is over? No longer able to make my condition worse, they can no longer alarm me. Worry and fright are evils they have delivered me from forever: that's always a comfort. Real evils have little hold on me; I resign myself easily to those I experience, but not to those I dread. My alarmed imagination brings them together, turns them over and over, draws them out, and increases them. Anticipating them torments me a hundred times more than being in their presence, and the threat of them terrifies me more than their actual arrival. As soon as they occur, the event—removing whatever imaginary power they had—reduces them to their correct value. Then I find them greatly inferior to what I had imagined; and even in the midst of my

suffering I do not fail to feel relieved. In this state, freed from any new fear and delivered from the turmoil induced by hope, habit alone will suffice to make more bearable for me day by day a situation which nothing can make worse; and to the extent that feeling becomes blunted with the lapse of time, they have no other way to stir it up again. That is the good my persecutors have done me by prodigally using up all the shafts of their animosity. They have deprived themselves of all mastery over me, and henceforth I can laugh at them.

Not quite two months ago, complete calm was reestablished in my heart.[3] For a long time I no longer feared anything, but I still hoped; and this hope, deluded one moment and frustrated another, was a hold by which a thousand diverse passions incessantly perturbed me. An event as sad as it was unforeseen has finally just erased this weak ray of hope from my heart and has made me see my fate forever and irreversibly fastened here-below. Since then I have become unreservedly resigned, and I have found peace again.

As soon as I began to catch a glimpse of the whole extent of the Plot, I gave up forever the idea of winning the public back over to my side during my lifetime; and, for that matter, now that this winning them back can no longer be reciprocal, it would henceforth be quite useless to me. In vain would men return to me; they would no longer find me. Because of the disdain they have inspired in me, dealing with them would be insipid to me and even burdensome; and I am a hundred times happier in my solitude than I could ever be living among them. They have torn all the charms of society from my heart. At my age, those charms cannot sprout anew; it is too late. Henceforth, whether men do good or evil to me, nothing concerning them makes any difference to me; and no matter what they do, my contemporaries will never mean anything to me.

But I still counted on the future; and I hoped that a better generation, examining more fairly both the judgments made about me by this one and its conduct toward me, would easily unravel the cunning of those who direct it and would finally see me as I am. This is the hope which made me write my *Dialogues* and prompted me to a thousand foolish attempts to pass them on to posterity.[4] This hope, though remote, held my soul in the same agitation as when I was still looking for a just heart in this century; and the hope that I cast in vain into the future also rendered me the plaything of the men of today. I stated in my *Dialogues* what I founded this expectation on.[5] I was mistaken. Fortunately, I sensed it early enough to find an interlude of complete calm and absolute rest before my last hour. This interlude began in the period of which I am speaking, and I have reason to believe it will not be interrupted again.

Very few days pass without new reflections confirming how greatly mistaken I was to count on winning back the public even in another age, since with respect to me it is led by guides who are continually renewed in the groups[6] that have taken a dislike to me. Individuals die, but not collective groups. The same passions are perpetuated in them, and their ardent hatred—as immortal as the Demon which inspires it—is as active as always. When all of my individual enemies are dead, Doctors and Oratorians will still live;[7] and even if I had only those two groups as persecutors, I could be sure that they would not leave my memory in greater peace after my death than they leave me in during my lifetime. In time, perhaps, the doctors—whom I really offended can be appeased. But the Oratorians—whom I loved, whom I esteemed, in whom I had complete trust, and whom I never offended—the Oratorians, Church people and half monks, will be forever implacable. Their own iniquity constitutes the crime for which their amour-propre will never forgive me. And the public, whose animosity they will take care to nourish and stir up continually, will be no more appeased than they.

Everything is finished for me on earth. People can no longer do good or evil to me here. I have nothing more to hope for or to fear in this world; and here I am, tranquil at the bottom of the abyss, a poor unfortunate mortal, but unperturbed, like God Himself.

Everything external is henceforth foreign to me. I no longer have neighbors,[8] fellow creatures, or brothers in this world. I am on earth as though on a foreign planet onto which I have fallen from the one I inhabited. If I recognize anything around me, it is only objects which distress me and tear my heart asunder; and I cannot cast my eyes on what touches and surrounds me without forever finding some disdainful object which makes me indignant or a painful one which distresses me. So let me remove from my mind all the troublesome objects I would bother myself with as painfully as I would uselessly. Alone for the rest of my life—since I find consolation, hope, and peace only in myself—I no longer ought nor want to concern myself with anything but me. It is in this state that I again take up the sequel to the severe and sincere examination I formerly called my *Confessions*. I consecrate my last days to studying myself and to preparing in advance the account I will give of myself before long. Let me give myself up entirely to the sweetness of conversing with my soul, since that is the only thing men cannot take away from me. If by dint of reflecting upon my inner dispositions I succeed in putting them in better order and in correcting the evil which may remain in them, my meditations will not be entirely useless; and even though I am no longer good for anything on earth, I will not have completely wasted my last days. The leisurely mo-

ments of my daily walks have often been filled with charming periods of contemplation which I regret having forgotten. I will set down in writing those which still come to me and each time I reread them I will enjoy them anew. I will forget my misfortunes, my persecutors, my disgrace, while dreaming of the prize my heart deserved.

These pages will, properly speaking, be only a shapeless diary of my reveries. There will be much concerning me in them, because a solitary person who reflects is necessarily greatly preoccupied with himself. Moreover, all the foreign ideas which pass through my head while I am walking will also find their place in them. I will say what I have thought just as it came to me and with as little connection as the ideas of the day before ordinarily have with those of the following day. But a new understanding of my natural temperament[9] and disposition will come from that all the same by means of a new understanding of the feelings and thoughts which constitute the daily fodder of my mind in the strange state I am in. These pages can be considered, then, as an appendix to my *Confessions*; but I no longer give them that title, no longer feeling anything to say which merits it. My heart has been purified in the forge of adversity and, in carefully sounding it, I hardly find any reprehensible inclinations remaining. What would I still have to confess now that all earthly affections have been torn from it? I have no more reason to praise than to blame myself: I am henceforth nothing among men, and that is all I can be, no longer having any real relations or genuine society with them. No longer able to do any good which does not turn to evil, no longer able to act without harming another or myself, to abstain has become my sole duty and I fulfill it as much as it is in me to do so. But despite this desuetude of my body, my soul is still active; it still produces feelings and thoughts; and its internal and moral life seems to have grown even more with the death of every earthly and temporal interest. My body is no longer anything to me but an encumbrance, an obstacle, and I disengage myself from it beforehand as much as I can.

Such a unique situation surely deserves to be examined and described, and to this examination I consecrate my last moments of leisure. To do so successfully, it would be necessary to proceed with order and method; but I am incapable of such work, and it would even take me away from my goal, which is to make myself aware of the modifications of my soul and of their sequence. I will perform on myself, to a certain extent, the measurements natural scientists perform on the air in order to know its daily condition. I will apply the barometer to my soul, and these measurements, carefully executed and repeated over a long period of time, may furnish me results as certain as theirs. But I do not extend my enterprise that far. I will be content to keep a record of the measurements without seeking to re-

duce them to a system. My enterprise is the same as Montaigne's, but my goal is the complete opposite of his: he wrote his *Essays* only for others, and I write my reveries only for myself.[10] If in my later days as the moment of departure approaches, I continue—as I hope—to have the same disposition as I now have, reading them will recall the delight I enjoy in writing them and causing the past to be born again for me will, so to speak, double my existence. In spite of mankind, I will still be able to enjoy the charm of society; and decrepit, I will live with myself in another age as if I were living with a younger friend.

I wrote my first *Confessions* and my *Dialogues* in constant anxiety about ways to keep them from the rapacious hands of my persecutors in order to transmit them, if it were possible, to other generations. With this work, the same worry no longer torments me; I know it would be useless. And now that the desire to be better understood by men has been extinguished in my heart, only profound indifference remains about the fate of my true writings and of the testimonies to my innocence—which have perhaps already all been forever reduced to nothing. Let them spy out what I am doing, let them worry about these pages, let them seize them, suppress them, falsify them; henceforth none of that bothers me. I neither hide nor show them. If they take them away from me while I am living, they will not take away from me the pleasure of having written them, nor the memory of their content, nor the solitary meditations whose fruit they are and whose source can be extinguished only when my soul is. If from the time of my first calamities I had known not to rail against my fate and to take the course I take today, all the efforts of men, all of their dreadful contrivances, would have had no effect on me, and they would no more have disturbed my rest by all their plots than they can henceforth disturb it by all the successful results of those plots.[11] Let them enjoy my disgrace at will; they will not prevent me from enjoying my innocence and from finishing my days in peace in spite of them.

Second Walk

Having, then, formed the project of describing the habitual state of my soul in the strangest position in which a mortal could ever find himself, I saw no simpler and surer way to carry out this enterprise than to keep a faithful record of my solitary walks and of the reveries which fill them when I leave my head entirely free and let my ideas follow their bent without resistance or constraint. These hours of solitude and meditation are the only ones in the day during which I am fully myself and for myself, without diversion, without obstacle, and during which I can truly claim to be what nature willed.

I soon felt I had too long delayed carrying out this project. Already less lively, my imagination no longer bursts into flame the way it used to in contemplating the object which stimulates it. I intoxicate myself less in the delirium of reverie. Henceforth there is more reminiscence than creation in what it produces. A tepid languor enervates all my faculties. The spirit of life is gradually dying out in me. Only with difficulty does my soul any longer thrust itself out of its decrepit wrapping; and were it not that I am hopeful of reaching the state to which I aspire because I feel I have a right to it, I would no longer exist but by memories. Thus, in order to contemplate myself before my decline, I must go back at least a few years to the time when, losing all hope here-below and no longer finding any food here on earth for my heart, I gradually became accustomed to feeding it with its own substance and to looking within myself for all its nourishment.

This resource, which I thought of too late, became so fruitful that it soon sufficed to compensate for everything. The habit of turning within eventually made me stop feeling and almost stop remembering my ills. By my own experience, I thus learned that the source of true happiness is within us and that it is not within the power of men to make anyone who can will to be happy truly miserable. For four or five years, I habitually tasted those internal delights that loving and sweet souls find in contemplation.[1] Those moments of rapture, those ecstasies, which I sometimes experienced in walking around alone that way, were enjoyments I owed to my persecutors. Without them I would never have found or become cognizant of the treasures I carried within myself. In the midst of so many riches, how could a faithful record of them be kept? In wanting to recall so

many sweet reveries, instead of describing them, I fell back into them. This is a state which is brought back by being remembered and of which we would soon cease to be aware, if we completely ceased feeling it.

I fully experienced this effect during the walks which followed my plans to write the sequel to my *Confessions*, especially during the one I am going to speak of and during which an unforeseen accident came to interrupt the thread of my ideas and give them another direction for some time.

After lunch on Thursday, the 24th of October, 1776, I followed the boulevards as far as the Rue du Chemin-Vert which I took up to the heights of Ménilmontant and from there, taking paths across the vineyards and meadows as far as Charonne, I crossed over the cheerful countryside which separates these two villages; then I made a detour in order to come back across the same meadows by taking a different route.[2] In wandering over them, I enjoyed that pleasure and interest which charming places have always given me and stopped from time to time to stare at plants in the vegetation. I noticed two I quite rarely saw around Paris, but which I found to be very abundant in that area. One is the *Picris hieracioides*,[3] belonging to the family of composite plants; and the other is the *Bupleurum falcatum*,[4] belonging to the family of umbelliferous plants. This discovery delighted and amused me for a very long time and ended in the discovery of an even rarer plant, especially in high places, namely, the *Cerastium acquaticum*[5] which, in spite of the accident that befell me the same day, I have come across in a book I had with me and have now placed in my herbarium.

Finally, after having looked thoroughly at several other plants I saw still in bloom and which I was always pleased to see even though I was familiar with their aspect and name, I gradually turned away from these minute observations so as to give myself up to the no less charming, but more moving, impression which the scene as a whole made on me. A few days before the grape-gathering had been completed; strollers from the city had already withdrawn; even the peasants were leaving the fields until the toils of winter. The countryside, still green and cheerful, but partly defoliated and already almost desolate, presented everywhere an image of solitude and of winter's approach. Its appearance gave rise to a mixed impression, sweet and sad, too analogous to my age and lot for me not to make the connection. I saw myself at the decline of an innocent and unfortunate life, my soul still full of vivacious feelings and my mind still bedecked with a few flowers—but flowers already wilted by sadness and dried up by worries. Alone and forsaken, I felt the coming cold of the first frosts, and my flagging imagination no longer filled my solitude with beings formed according to my heart. Sighing, I said to myself: "What have I done here-

below? I was made to live, and I am dying without having lived. At least it has not been my fault; and I will carry to the author of my being, if not an offering of good works which I have not been permitted to perform, at least a tribute of frustrated good intentions, of healthy feelings rendered ineffectual, and of a patience impervious to the scorn of men." I was moved by these reflections; I went back over the movements of my soul from the time of my youth, through my mature age, since having been sequestered from the society of men, and during the long seclusion in which I must finish my days. I mulled over all the affections of my heart with satisfaction, over its so tender but blind attachments, over the less sad than consoling ideas on which my mind had nourished itself for some years; and with a pleasure almost equal to that I had in giving myself up to this musing, I prepared to remember them well enough to describe them. My afternoon was spent in these peaceful meditations, and I was coming back[6] very satisfied with my day when, at the height of my reverie, I was dragged out of it by the event which remains for me to relate.

I was on the road down from Ménilmontant almost opposite the Galant Jardinier[7] at about six o'clock when some people walking ahead of me suddenly swerved aside and I saw a huge Great Dane rushing down upon me. Racing before a carriage, the dog had no time to check its pace or to turn aside when it noticed me. I judged that the only means I had to avoid being knocked to the ground was to make a great leap, so well-timed that the dog would pass under me while I was still in the air. This idea, quicker than a flash and which I had the time neither to think through nor carry out, was my last before my accident. I did not feel the blow, nor the fall, nor anything of what followed until the moment I came to.

It was almost night when I regained consciousness. I found myself in the arms of three or four young people who told me what had just happened to me. The Great Dane, unable to check its bound, had collided against my legs and, bowling me over with its mass and speed, had caused me to fall head first: my upper jaw had struck against a very rough pavement with the whole weight of my body behind it; and the shock of the fall was even greater because I was walking downhill and my head had struck lower than my feet.

The carriage the dog was with was following right behind it and would have run me over had the coachman not reined in his horses instantly. That is what I learned from the account of those who had picked me up and who were still holding me up when I came to. The state in which I found myself in that instant is too unusual not to give a description of here.

Night was coming on. I perceived the sky, some stars, and a little greenery. This first sensation was a delicious moment. I still had no feeling of

myself except as being "over there." I was born into life at that instant, and it seemed to me that I filled all the objects I perceived with my frail existence. Entirely absorbed in the present moment, I remembered nothing; I had no distinct notion of my person nor the least idea of what had just happened to me; I knew neither who I was nor where I was; I felt neither injury, fear, nor worry. I watched my blood flow as I would have watched a brook flow, without even suspecting that this blood belonged to me in any way. I felt a rapturous calm in my whole being; and each time I remember it, I find nothing comparable to it in all the activity of known pleasures.

They asked me where I lived; it was impossible for me to say. I asked where I was; they told me: "at the Haute-Borne."[8] They might just as well have said: "on Mount Atlas." In succession, I had to ask what country I found myself in, what city, and what district. Even that was not enough for me to know where I was. It took me the whole distance from there to the boulevard to recall my address and my name. A Gentleman I did not know, but who was charitable enough to accompany me a little way, learning that I lived so far away, counseled me to get a Cab at the Temple[9] to take me home. I walked easily and sprightly, feeling neither pain nor hurt, although I kept spitting out a lot of blood. But I had an icy shiver which made my jarred teeth chatter in a very uncomfortable way. When I reached the Temple, I thought that since I was walking without trouble it was better to continue on foot than to risk perishing from cold in a cab. Thus I covered the half-league[10] from the Temple to the Rue Platrière, walking without trouble, avoiding obstacles and coaches, choosing and following my way just as well as I would have done in perfect health. I arrived, opened the lock[11] they had installed at the street door, climbed the staircase in darkness, and finally entered my home without incident, apart from my fall and its consequences, of which, even then, I was not yet fully aware.

My wife's cries upon seeing me made me understand that I was worse off than I thought. I passed the night without yet being aware of, or feeling, my injuries. Here is what I felt and discovered the next day: my upper lip was split on the inside up to my nose; outside, the skin had held firm and prevented the lip from being split completely open; four teeth had been pushed into my upper jaw; the whole part of the face which covers it was extremely swollen and skinned; my right thumb was sprained and very large; my left thumb hurt painfully; my left arm was sprained; my left knee was also very swollen, and a severely painful bruise totally prevented me from bending it. But with all this upset, nothing broken, not even a tooth: now in a fall like this one, that is good luck bordering on the prodigious.

That, very faithfully, is the story of my accident. In a few days this story spread through Paris, so changed and distorted that it was impossible to recognize it in any way. I should have counted on this metamorphosis in advance. But so many bizarre circumstances were joined to it, so many obscure remarks and reticences accompanied it, they spoke to me about it in such a ridiculously discreet manner, that all these mysteries worried me. I have always hated the dark; it naturally fills me with a dread which the darkness they have surrounded me with for so many years could not have diminished. Of all the unusual events of this time period, I will relate only one, but one sufficient to permit judgment about the others.

M. Lenoir, Lieutenant General of the police,[12] with whom I had never had any dealings, sent his secretary to inquire about my tidings and to tender me pressing offers of service which, given the circumstances, appeared to me to be of no great use for my relief. His secretary did not fail to urge me very insistently to avail myself of these offers, even going so far as to tell me that if I did not trust him, I could write directly to M. Lenoir. This great eagerness and the confidential manner which accompanied it led me to understand that beneath it all was some mystery which I tried in vain to penetrate. Hardly that much was needed to alarm me, especially given the state of agitation my head was in from my accident and the resultant fever. I abandoned myself to a thousand troubling and sad conjectures and made commentaries on everything which went on around me, commentaries which were more a sign of the delirium of fever than of the composure of a man who no longer takes interest in anything.

Another event occurred which completely destroyed my serenity. Mme d'Ormoy[13] had sought me out for some years without my having been able to guess why. Pretentious little gifts and frequent visits without purpose or pleasure showed me well enough that she had a secret goal in all that, but not well enough what that goal was. She had spoken to me of a novel she wanted to write to present to the Queen. I had told her what I thought of women authors. She had intimated that the goal of this project was to restore her fortunes, a goal for which she needed protection; I had nothing to reply to that. She later told me that, having been unable to gain access to the Queen, she was determined to give her book to the public. It was no longer the moment to give her advice she had not asked me for and which she would not have followed. She had spoken of showing me the manuscript beforehand. I begged her to do nothing of the sort, and she did nothing of the sort.

One fine day during my convalescence I received this book from her completely printed and even bound. In the preface I saw such swollen praises of me, laid on so clumsily and with so much affectation, that I was

disagreeably impressed by them.[14] The crude fawning which was so perceptible in it was never associated with benevolence; about that, my heart could never be deceived.

A few days later, Mme d'Ormoy and her daughter came to see me. She informed me that because of a note it contained, her book was causing the greatest fuss. I had hardly noticed this note while flipping rapidly through the novel. I reread the note after Mme d'Ormoy's departure. I examined the way it was constructed. I believed that in it I discovered the motive for her visits, her wheedlings, and the swollen praises of her preface; and I judged that there was no other goal in all of this than to dispose the public to attribute the note to me and consequently to burden me with the blame it would attract to its author in the circumstances under which it was published.[15]

I had no means of putting an end to this fuss and the impression it could make; the only thing I could do was not foster it by continuing to endure the vain and ostensive visits of Mme d'Ormoy and her daughter. Here is the note I wrote to the mother for this purpose:

> Rousseau, not receiving any authors in his home, thanks Mme d'Ormoy for her kindness and begs her to honor him with her visits no more.

She replied to me by a letter, honest in appearance but contrived, like all those which people write to me in such cases, I had barbarously plunged a dagger into her sensitive heart and I must believe by the tone of her letter that because of her intense and true feelings for me, she would never endure this break without dying. So it is that straightforwardness and frankness in everything are horrid crimes in the world, and I appear nasty and ferocious to my contemporaries when I am guilty of no other crime in their eyes than that of not being false and perfidious as they.

I had already gone outside several times and had even strolled in the Tuileries quite a few times when I saw, by the astonishment of several of those who met me, that there was still another bit of news concerning me of which I was ignorant. I finally learned that it was rumored that I had died from my fall; and this rumor spread so rapidly and so obstinately that, more than two weeks after I had become aware of it, the King himself and the Queen spoke of it as of something certain. In announcing this happy bit of news the *Avignon Courier*, according to what someone had the concern to write me, did not fail on this occasion to give a preview of the tribute of outrages and indignities which are being prepared in the form of a funeral oration in memory of me after my death.[16]

This news was accompanied by an even more unusual circumstance

which I learned of only by chance and which I have not been able to learn about in any detail. It is that they had at the same time started a subscription for printing the manuscripts they would find in my home. By that I understood that they were keeping a collection of fabricated writings available just for the purpose of attributing them to me right after my death: for to think they would faithfully print any of those they would actually find is a folly that cannot enter into the mind of a sensible man and from which fifteen years of experience have only too well protected me.

These observations, made one after the other and followed by many others which were scarcely less astonishing, caused my imagination, which I had believed to be calmed down, to become alarmed all over again. And this black darkness with which they relentlessly surrounded me rekindled all the dread it naturally inspires in me. I wore myself out making a thousand commentaries on it all and trying to understand the mysteries they rendered inexplicable for me. The only constant result of so many enigmas was to confirm all of my previous conclusions, to wit, that my personal fate and that of my reputation have been so fastened by the connivance of the whole present generation that no effort on my part could shield me, since it is completely impossible for me to transmit any bequest to other ages without making it pass in this age through the hands of those interested in suppressing it.

But this time, I went further. The accumulation of so many fortuitous circumstances, the elevation of all my cruelest enemies favored, so to speak, by fortune; all those who govern the State, all those who direct public opinion, all the people in official positions, all the men of influence, picked and culled as it were from among those who have some secret animosity against me in order to concur in the common plot; this universal agreement is too extraordinary to be purely fortuitous. If there had been a single man who had refused to be an accomplice to it, a single event which had gone against it, a single unforeseen circumstance which had been an obstacle to it, any of that would have been enough to make it fail. But all the acts of will, all the unlucky events, fortune and all its revolutions have made firm the work of men. And such a striking concurrence, which borders on the prodigious, cannot let me doubt that its complete success is written among the eternal decrees. Swarms of individual observations either in the past or in the present, so confirm me in this opinion that I cannot prevent myself from henceforth considering as one of those secrets of Heaven impenetrable to human reason the same work that until now I looked upon as only a fruit of the wickedness of men.

This idea, far from being cruel and rending to me, consoles me, calms

me, and helps me to resign myself. I do not go as far as St. Augustine who would have consoled himself to be damned if such had been the will of God. My resignation comes, it is true, from a less disinterested source, but one no less pure and to my mind, more worthy of the perfect Being whom I adore. God is just; He wills that I suffer; and He knows that I am innocent. That is the cause of my confidence; my heart and my reason cry out to me that I will not be deceived by it. Let me, therefore, leave men and fate to go their ways. Let me learn to suffer without a murmur. In the end, everything must return to order, and my turn will come sooner or later.

Third Walk

"I continue to learn while growing old."

Solon frequently repeated this line in his old age.[1] There is a sense in which I could also say it in mine, but what experience has made me acquire these past twenty years is a very sad bit of knowledge: ignorance is still preferable. Adversity is undoubtedly a great teacher, but it charges dearly for its lessons; and the profit we draw from them is frequently not worth the price they have cost. Besides, before we have obtained all this learning by such tardy lessons, the occasion to use it passes. Youth is the time to study wisdom; old age is the time to put it into practice. Experience always instructs, I admit; but it is profitable only for the time we have left to live. Is the moment when we have to die the time to learn how we should have lived?

Humph! What benefit do I get from such late and painfully acquired enlightenment concerning my fate and concerning other people's passions, whose work it is? By coming to know men better, I have only felt better the misery into which they have thrust me; and while this knowledge has shown me all their snares, it has not enabled me to avoid any. If only I had been able to preserve that feeble-minded, but sweet, trustfulness which made me the prey and plaything of my noisy friends for so many years and kept me from having the least suspicion of all their plots, even though I was bound up in them. I was their dupe and victim; it is true, but I thought myself loved by them; and, attributing to them as much friendship for me as they had inspired in me for them, my heart rejoiced. Those sweet illusions are destroyed. The sad truth that time and reason have unveiled to me by making me sense my misfortune has made me see that there was no remedy for it and that all that was left was for me to resign myself to it. Thus, all the experience proper to my age is useless for me now in this condition and of no benefit for the future.

We enter the lists at our birth; we leave them at death. What use is it to learn to handle our chariot better when we are at the end of the race? There is nothing more to think about then except how we will get out of it. If there is any study still appropriate for an Old Man, it is solely to learn to die; and this is precisely what we study least at my age. At this point, we think of anything but that. All old men hang on to life more than chil-

dren and leave it with more reluctance than youngsters. That is because, all their toils having been for this very life, they see at its end that they have wasted their labors. All their cares, all their goods, all the fruits of their toilsome nights—they leave everything when they pass away. They have not dreamed of acquiring anything during their life that they might carry away at their death.

I told myself all that when it was time to tell it to myself; and if I have not put my reflections to better use, it is not for lack of making them in time or of having mulled them over thoroughly. Cast from childhood into the whirlwind of the world, I soon learned from experience that I was not made to live in it and that in it I would never reach the state my heart felt a need for. Ceasing, therefore, to seek among men the happiness I felt incapable of finding in their presence, my ardent imagination readily jumped beyond the interval of my life which had barely begun—as though from a terrain which was foreign to me—to settle down in a quiet resting place where I could anchor myself.

This feeling, nourished by education from the time of my childhood and reinforced during my whole life by this long web of miseries and misfortunes which has filled it, has at all times made me seek to know the nature and the destination of my being in a more interested and careful manner than I have found any other man seek to do. I have seen many who philosophized much more learnedly than I, but their philosophy was, so to speak, foreign to them. Wanting to be more knowledgeable than others, they studied the universe in order to know how it was ordered, just as they would have studied some machine they might have perceived through pure curiosity. They studied human nature to be able to speak knowingly about it, but not in order to know themselves; they toiled in order to instruct others, but not in order to enlighten themselves within. Several of them only wanted to do a book, any book, provided it was well received. When theirs was done and published, its content no longer interested them in any way, unless it were to make others adopt it and to defend it in case it were attacked; but for the rest, they drew nothing from it for their own use and were not even concerned whether this content were false or true—provided it was not refuted. As for me, when I desired to learn, it was in order to know and not in order to teach. I have always believed that before instructing others, it was necessary to begin by knowing enough for oneself; and of all the studies I have tried to undertake during my life in the midst of men, there is hardly any I could not just as well have undertaken alone on a desert island to which I might have been confined for the rest of my days. What we ought to do depends a lot on what we ought to believe; and in everything which is not connected with the

first needs of nature, our opinions are the rule of our actions. According to this principle, which has always been my own, I have sought frequently and for a long time to know the genuine end of my life in order to direct its use and I soon became consoled about being so inept at skillfully handling myself in this world when I sensed that this end should not be sought in it.

Born into a family in which morals[2] and piety reigned, raised subsequently with tenderness in the home of a minister full of wisdom and religion, from the time of my most tender childhood I have received principles, maxims—others would say prejudices—which have never completely deserted me.[3] Given into my own keeping while still a child and enticed by caresses, seduced by vanity, lured by hope, forced by necessity, I became a Catholic, but I always remained a Christian; and soon won over by habit, my heart became sincerely attached to my new religion.[4] The instructions and examples of Mme de Warens made me firmer in this attachment.[5] The rural solitude in which I passed the flower of my youth, the study of good books to which I completely gave myself up, reinforced in her presence my natural disposition to affectionate feelings and rendered me devout almost in the manner of Fénelon.[6] Secluded meditation, the study of nature, and contemplation of the universe force a solitary person to lift himself up incessantly to the author of things, to search with tender concern for the purpose in everything he sees and the cause of everything he feels. When my fate threw me back into the torrent of the world, I no longer found anything in it which could flatter my heart for a moment. Longing for my sweet leisure followed me everywhere and made everything apt to lead to fortune or honors that could be found within my reach seem indifferent and disgusting. Uncertain in my anxious desires, I hoped for little; I obtained less. And, in the very rays of prosperity, I felt that were I to obtain everything I thought I was seeking, I would in no way have found this happiness for which my heart was avid, but did not know how to recognize. Thus, everything contributed to detach my affections from this world, even before the misfortunes which were destined to alienate me from it completely. I reached the age of forty, wavering between indigence and good fortune, between wisdom and aberration, full of vices induced by habit but without any bad propensity in my heart, living according to chance without any principles determined by my reason, and inadvertent about my duties without scorning them, yet often without being fully cognizant of them.

From the time of my youth, I had set this age of forty as the terminal point for my efforts to succeed and as the one for all of my vain ambitions. I was fully resolved once this age was reached that whatever situation I might be in, I would struggle no longer to get out of it and would spend

the remainder of my days living from day to day without ever again concerning myself about the future. The moment having come, I executed this plan without difficulty; and even though my fortune then seemed to want to take a turn for the better, I renounced it not only without regret but with genuine pleasure. In releasing myself from all those lures and vain hopes, I fully gave myself up to carelessness and to the peace of mind which always constituted my most dominant pleasure and most lasting propensity. I forsook the world and its pomp; I renounced all finery: no more sword, no more watch, no more white stockings, gilding, or headdress; a very simple wig, a good coarse cloth garment; and, better than all that, I eradicated from my heart the cupidity and covetousness which give value to everything I was forsaking. I resigned the post I then held, for which I was in no way suited,[7] and began to copy music at so much a page, an occupation which had always greatly appealed to me.

I did not restrict my reform to external things. I felt that this reform was such as to require another of opinions, undoubtedly more painful but more necessary; and, resolved not to do it twice, I undertook to submit my inner self to a severe examination which would regulate it for the rest of my life just as I wanted to find it at my death.

A great revolution which had just taken place in me; another moral world which was unveiling itself to my observations; men's insane judgments, whose absurdity I was beginning to feel, without yet foreseeing how much I would be victimized by them; the ever growing need for some good besides literary vainglory whose vapor had hardly touched me before I was already disgusted by it; the desire, in short, to follow for the rest of my course a less uncertain route than the one I had just spent the finest half on—everything forced me to this great review for which I had long felt the need. I undertook it, therefore, and I neglected nothing within my power to carry the enterprise out well.

It is from this epoch that I can date my complete renunciation of the world and this intense desire for solitude which has not forsaken me since. The task I was undertaking could be carried out only in absolute seclusion; it required long and peaceful meditations that the tumult of society does not permit. This forced me to take up another way of life for a while, one in which I was subsequently so comfortable that, having since then interrupted it only when forced to and for a short time, I have taken it up again wholeheartedly and have restricted myself to it without difficulty whenever I could. Afterward, when men reduced me to living alone, I found that by sequestering me to make me miserable, they had done more for my happiness than I had ever been able to do.

I gave myself up to the toil I had undertaken with a zeal proportionate

both to the importance of the matter and to the need I felt I had of it. I was living then among modern philosophers who hardly resembled the ancient ones. Instead of removing my doubts and ending my irresolution, they had shaken all the certainty I thought I had concerning the things that were most important for me to know. Ardent missionaries of Atheism and very imperious dogmatists, there was no way that they would, without anger, put up with anyone daring to think other than they did about any point whatever. I had often defended myself quite feebly, due to hatred for dispute and little talent for sustaining it, But I never adopted their distressing doctrine. And this resistance to such intolerant men—who had their own interests, moreover—was not the least of the causes which stirred up their animosity.

They had not persuaded me, but they had troubled me. Their arguments had shaken me without having ever convinced me; I found no good reply to them, but I felt there must be one. I accused myself less of error than of ineptitude, and my heart replied to them better than my reason.

Finally I said to myself: will I let myself be tossed about eternally by the sophisms of better speakers when I am not even sure that the opinions they preach and are so eager to make others adopt are really their own? The passions which govern their doctrines and their interest in having this or that believed make it impossible to penetrate what they themselves believe. Can one expect good faith among the leaders of a faction? Their philosophy is for others; I need one for me. Let me look for it with all my strength while there is still time, so that I will have a set rule of conduct for the rest of my days. Here I am in the full maturity of age, in all the strength of my understanding. I am already beginning to decline. If I continue to wait, I will no longer have the use of my strength for my delayed deliberation. My intellectual faculties will have lost some of their agility. I will not do as well what I can do today in the best possible way. Let me seize this favorable moment. It is the epoch of my external and material reform; let it also be that of my intellectual and moral reform. Let me settle my opinions and my principles once and for all, and let me be for the remainder of my life what I will have found I ought to be after having carefully thought it over.

I carried out this project slowly and with various fresh starts, but with all the effort and all the attention of which I was capable. I felt intensely that the tranquility of the remainder of my days and my total lot depended on it. At first I found myself in such a labyrinth of encumbrances, difficulties, objections, twistings, and darkness that, twenty times tempted to abandon everything, I was ready to renounce such a futile quest and to abide by the rules of common prudence in my deliberations without seek-

ing for anything more in principles I had so much trouble unraveling. But this very prudence was so foreign to me, I felt myself so unfit to acquire it, that to take it for my guide was nothing other than to want to seek—across seas and storms, without a rudder or compass—an almost inaccessible lighthouse which pointed out no harbor for me.

I persisted. For the first time in my life I had courage, and to its success I owe having been able to endure the horrible fate which from that time began to envelop me without my having had the least suspicion of it. After the most ardent and sincere seeking that has perhaps ever been made by any mortal, I determined for my whole life all the sentiments[8] important for me to have; and though I may have deceived myself in my conclusions, I am at least sure that my error cannot be imputed to me as a crime, for I made every effort to keep myself from it. To be sure, I have no doubt but what the prejudices of childhood and the secret wishes of my heart made the scale lean to the side the most consoling for me. It is difficult to keep ourselves from believing what we so ardently desire, and who can doubt that most men's interest in admitting or rejecting the judgments of the next life determines their faith and does so according to their hope or fear. All of that could dazzle my judgment, I agree, but not alter my good faith, for I feared deceiving myself about anything. If everything depended on the use made of this life, it was important for me to know it so that I could at least turn it to the best account within my power while there was still time and not be a complete dupe. But given the way I felt myself disposed, what I had to dread most in the world was risking the eternal lot of my soul to enjoy the goods of this world which have never appeared very worthwhile to me.

I admit again that I did not always satisfactorily remove all these difficulties which had bothered me and about which our philosophers had so often battered my ears. But, resolved to settle once and for all these matters human intelligence has so little hold over and finding impenetrable mysteries and insoluble objections on all sides, I adopted for each question the sentiment which seemed to me the best established by direct means and the most believable in itself without paying attention to objections I could not resolve, but which were refuted by other no less strong objections in the opposite system. A dogmatic tone about these matters is suitable only to charlatans, but it is important to have one's own feeling and to choose it with all the maturity of judgment one can put into it. If we fall into error in spite of that, we could not justly suffer the penalty, since we would not be at fault. That is the unshakable principle which serves as the basis of my security.

The result of my painful seeking was approximately that which I have

since set down in the "Profession of Faith of the Savoyard Vicar," a work unwarrantedly prostituted and profaned among the present generation but which may one day make a revolution among men, if good sense and good faith are ever reborn among them.[9]

Since then, having remained content with the principles I had adopted after such a long and reflective meditation, I have made them the immovable rule of my conduct and faith without bothering myself any longer about the objections I had not been able to resolve or about those I had not been able to foresee and which presented themselves anew to my mind from time to time. They sometimes bothered me, but never shook me. I have always said to myself: those are all only metaphysical quibbles and subtleties which have no weight next to the fundamental principles adopted by my reason, confirmed by my heart, and which all carry the seal of inner assent in the silence of the passions. In matters so much greater than human understanding, will an objection I cannot resolve overturn a whole body of doctrine so solid, so well integrated and formed with so much meditation and care, so very suited to my reason, to my heart, to my whole being, and reinforced by the inner assent I feel to be lacking in all the others? No, vain arguments will never destroy the congruity I perceive between my immortal nature, the constitution of this world, and the physical order I see reigning in it. In the corresponding moral order, whose arrangement I discovered by my seeking, I find the supports I need to endure the miseries of my life. In any other arrangement I would live without resource and die without hope. I would be the most unhappy of creatures. Let me hold then to this one, which alone suffices to render me happy in spite of fortune and men.

Do not this deliberation and the conclusion I drew from it seem to have been dictated by Heaven itself to prepare me for the fate which awaited me and to enable me to endure it? What would I have become, what would I yet become during the frightful periods of anguish which awaited me and the unbelievable situation I am reduced to for the rest of my life, if—having remained without a refuge where I could escape from my implacable persecutors, without compensation for the disgrace to which they submit me in this world, and without hope of ever obtaining the justice due me—I had seen myself completely surrendered up to the most horrible lot any mortal has undergone on earth? While, serene in my innocence, I imagined only esteem and benevolence for me among men and while my open and confiding heart poured itself out to friends and brothers, traitors silently entwined me with nets forged in the pits of Hell. Taken unawares by the most unforeseen of all misfortunes and those most terrible for a proud soul, dragged through the mud without ever knowing by whom or

for what, thrust into an abyss of ignominy, enveloped in horrible darkness through which I discerned only sinister objects, I was floored by the first surprise attack; and I would never have recovered from the despondency this unforeseen kind of misfortune cast me into had I not stored up reserves of strength ahead of time in order to pick myself up from my fall.

Only after years of agitation, when my spirits were finally restored and I began to be myself again, did I feel the worth of the resources I had stored up for adversity. Settled on all the things it was important for me to judge, I saw—when I compared my maxims to my situation—that I was giving far more importance to the insane judgments of men and to the petty events of this short life than they possessed. Since this life is only a series of ordeals, it mattered little what these ordeals were like provided the effect they were destined for resulted from them; and consequently, the greater, stronger, and more multiplied the ordeals, the more advantageous it was to know how to endure them. All of the most intense pains lose their strength for anyone who sees the great and sure compensation for them, and the certainty of this compensation was the principal fruit I had drawn out of my preceding meditations.

It is true that in the midst of the innumerable outrages and immeasurable indignities by which I felt myself overwhelmed on all sides, intervals of worry and doubt occasionally arose to shake my hope and trouble my tranquility. The powerful objections I had not been able to resolve then presented themselves to my mind more forcefully to finish striking me down precisely at those times when, overburdened by the weight of my fate, I was ready to give way to discouragement. Frequently, new arguments I heard came back to mind in support of those which had already tormented me. Ah! I said to myself then, when my heart was constricting so as to suffocate me, who will keep me from despair if my lot is so horrible that I no longer see anything but idle fancies in the consolations my reason furnished me; if thus destroying its own work it overturns the whole support of hope and confidence it had stored up for me in adversity? What kind of a support are illusions which delude me alone in the whole world? The whole present generation sees only errors and prejudices in the sentiments with which I alone nourish myself. It finds truth and evidence in the system opposed to mine. It even seems incapable of believing that I adopt my own in good faith; and although I give myself up to it wholeheartedly, even I find it has insurmountable difficulties which are impossible for me to resolve but which do not prevent me from persisting in it. Am I then alone wise, alone enlightened, among mortals? To believe that this is the way things are, is it sufficient that they suit me? Can I put enlightened trust in appearances which have nothing solid in the

eyes of other men and which would seem illusory even to me if my heart did not confirm my reason? Would it not have been better to engage my persecutors with equal weapons by adopting their maxims than to remain prey to their attacks because of the idle fancies of my own maxims, without acting to repulse them? I believe myself wise, but I am only a dupe, a victim, and a martyr of a vain error.

How many times in these moments of doubt and uncertainty was I ready to abandon myself to despair! If I had ever spent an entire month in this state, my life and I would have been done for. But although these crises used to occur quite frequently, they have always been short; and now even though I am not yet completely free of them, they are so rare and so fleeting that they do not even have the strength to disturb my calm. They are light worries which affect my soul no more than a feather which falls into the river can alter the water's current. I felt that to put the same points I had previously settled into question all over again presupposed that I had new insights, a more formed judgment, or more zeal for the truth than at the time of my seeking. Since none of these is or can apply to my case, there could be no solid reason for me to prefer opinions which tempted me in a moment of overwhelming despair but which would only augment my misery to feelings adopted in the vigor of age, in complete maturity of mind, after the most reflective examination, and in times when the calm of my life left me no other dominant interest than that of knowing the truth. Today, when my heart is constricted from distress, my soul weighed down by vexations, my imagination terrified, and my head troubled by the many frightful mysteries which surround me; today, when all of my faculties, weakened by old age and anxieties, have lost all of their spring shall I wantonly deprive myself of all the resources I had stored up? Shall I place more trust in my declining reason, thereby making myself unjustly unhappy, than in my full and vigorous reason, thereby getting compensation for the evils I suffer without having deserved them? No, I am not wiser, more learned, or of better faith than when I settled all those great questions. I was not unaware then of the difficulties I allow myself to be troubled by today. They did not stop me, and if some new ones arise which have not yet been perceived, they are the sophisms of a subtle metaphysics which is unable to weigh the eternal truths admitted at all times by all wise men, recognized by all nations, and engraved on the human heart in indelible characters. While meditating about these matters, I knew that human understanding, circumscribed by the senses, could not embrace them in their full extent. I therefore limited myself to what was within my reach, without getting myself involved in what went beyond it. This decision was reasonable; I embraced it previously and held myself to it with

the assent of my heart and of my reason. On what grounds would I renounce it today when so many powerful reasons ought to keep me attached to it? What danger do I see in following it? What profit would I find in abandoning it? By adopting the doctrine of my persecutors, would I also adopt their morality? This rootless and fruitless morality which they pompously display in books or in some striking scene on the stage without any of it ever penetrating the heart or the reason? Or else this other secret and cruel morality, the esoteric doctrine of all of their initiates, for which the other only serves as a mask, which is the only one they follow in their conduct, and which they have so skillfully practiced with respect to me? This purely offensive morality is of no use for defense and is good only for aggression. How would it be of use to me in the condition to which they have reduced me? My innocence alone sustains me in my misfortunes; and how much unhappier would I make myself if, ridding myself of this single but powerful resource, I substituted wickedness for it? Would I reach their level in the art of harming; and were I to succeed, from what evil would the one I might do them relieve me? I would lose my self-esteem and gain nothing in its place.

Reasoning in this way with myself, I succeeded in no longer allowing myself to be shaken in my principles by captious arguments, by insoluble objections, or by difficulties which went beyond my reach and perhaps beyond that of the human mind. My own mind remains as firmly tempered as I was able to make it and has become so well accustomed to resting there in the shelter of my conscience that no foreign doctrine, old or new, can any longer move it or trouble my rest for an instant. Fallen into mental languor and heaviness, I have forgotten even the reasonings on which I grounded my belief and my maxims, but I will never forget the conclusions I drew from them with the approval of my conscience and of my reason, and I hold to them henceforth. Let all the philosophers come cavil in opposition: they will waste their time and labors. For the rest of my life, with regard to everything, I hold to the course I took when I was in more of a condition to choose well.

Serene in this disposition, I find in it, along with self-contentment, the hope and the consolation I need in my situation. It is not possible that a solitude so complete, so permanent, so sad in itself, that the ever perceptible and ever active animosity of the whole present generation, and that the indignities this generation incessantly overwhelms me with will not sometimes throw me into despondency. Faltering hope and discouraging doubts still return from time to time to trouble my soul and to fill it with sadness. At that moment, unable to perform the mental operations needed to reassure myself, I must recall my former resolutions. The cares, the at-

tention, the heartfelt sincerity that I applied in forming them come back to my mind then and restore all of my confidence. Thus, I refuse all new ideas as baleful errors which have only a false appearance and are good only to trouble my rest.

Confined thus within the narrow sphere of my former knowledge, I do not share with Solon the happiness of being able to learn each day while growing old and I even ought to keep myself from the dangerous pride of wanting to learn what I am henceforth unable to know well. But if few acquisitions remain for me to hope for in the way of useful insights, very important ones remain for me to make in the way of the virtues necessary for my condition. In that regard, it is time to endow and adorn my soul with learning it might carry away with it when, delivered from this body which clouds and blinds it and seeing truth without a veil, it will perceive the wretchedness of all the knowledge our false learned men are so vain about. It will bemoan the moments wasted in this life trying to acquire that knowledge. But patience, sweetness, resignation, integrity, and impartial justice are goods we carry away with ourselves and with which we can perpetually endow ourselves, not fearing that even in death they would lose their worth for us. It is to this unique and useful study that I devote the rest of my old age. I will be happy if by the progress I make with myself I learn to leave life not better, for that is not possible, but more virtuous than I entered it!

Fourth Walk

Of the small number of Books I still occasionally read, Plutarch is the one who grips and benefits me the most. He was the first I read in my childhood, he will be the last I read in my old age; he is almost the only author I have never read without gaining something. The day before yesterday, I was reading in his moral works the treatise "How to Profit from One's Enemies."[1] The same day, while arranging some pamphlets sent to me by their authors, I came across one of the journals of the Abbé Rosier on the title page of which he had written these words: "Vitam vero impendenti, Rosier."[2] Too familiar with the turns of phrase of these Gentlemen to be fooled by this one, I understood that by that semblance of politeness he had meant to be cruelly ironic toward me. But based on what? Why this sarcasm? What could I have done to warrant it? To profit from the lessons of the good Plutarch, I resolved to devote the walk of the following day to examining myself on lying and I came to it quite confirmed in the previously held opinion that the "know thyself" of the temple of Delphi was not as easy a maxim to follow as I had believed in my *Confessions*.

The following day, having set off to carry out this resolution, the first idea which came to me when I began to collect my thoughts was that of a dreadful lie I told in my[3] early youth, the memory of which has troubled me all my life and even comes in my old age to sadden my heart again, already distressed as it is in so many other ways. This lie, in itself a great crime, must have become an even greater one because of its consequences —of which I have always been unaware, but which remorse has made me suppose as cruel as possible. However, considering only how I was disposed when telling it, this lie was simply an effect of mortification; and far from originating from an intention to harm her who was the victim of it, I can swear by Heaven that in the very instant this invincible shame tore it from me, I would joyfully have shed all my blood to turn the consequences on myself alone.[4] This is a delirium I can explain only by saying, and this is what I believe I feel, that in that instant my timid natural temperament subjugated all the wishes of my heart.

The memory of this unfortunate act and the inextinguishable regrets it left me have inspired in me a horror for lying that should have preserved

my heart from this vice for the rest of my life. When I adopted my motto, I felt deserving of it and I did not doubt I was worthy of it when, due to the phrase of Abbé Rosier, I began to examine myself more seriously.

Then, scrutinizing myself more carefully, I was quite surprised at the number of things of my own invention I recalled having passed off as true at the same time that, inwardly proud of my love for truth, I was sacrificing my security, my interests, and myself to it with an impartiality of which I know no other example among human beings.

What surprised me the most was that in recalling these fabrications, I felt no true repentance for them. I, in whose heart nothing offsets the horror of a falsehood, I, who would brave torture if it were necessary to lie to avoid it—by what bizarre inconsistency did I thus lie with gaiety of heart, unnecessarily, without profit, and by what inconceivable contradiction did I feel not the least regret, I, who for fifty years have not ceased to be afflicted by remorse for a lie? I have never become inured to my faults. Moral instinct has always guided me well; my conscience has preserved its initial integrity; and even if it had been altered by bending to my interests, how—having preserved all its rectitude on those occasions when a man, forced by his passions, may at least excuse himself for his weakness—does it lose its rectitude only with regard to indifferent matters for which there is no excuse for vice? I saw that the accuracy of the judgment I had to make about myself on this point depended upon a solution to this problem and, after having thoroughly examined it, this is the manner in which I managed to explain it to myself.

I remember having read in a Philosophy Book that to lie is to conceal a truth we ought to make manifest. From that definition, it indeed follows that to withhold a truth we have no obligation to declare is not to lie: but does he who, not content with not telling the truth in such a case, says the opposite, lie or not? According to the definition, we could not say that he lies. For if he gives counterfeit money to a man to whom he owes nothing, he undoubtedly deceives this man, but he does not rob him.

Two questions arise here for examination, each one very important. The first, when and how we owe the truth to another, since we do not always owe it. The second, whether there are cases in which we may innocently deceive. I am well aware that this second question is entirely settled: negatively in books, where the most austere morality costs the author nothing; affirmatively in society, where the morality of books is considered idle chatter impossible to put into practice. So let me leave these mutually contradicting authorities and seek to resolve these questions for myself by my own principles.

General and abstract truth is the most precious of all goods. Without it,

man is blind; it is the eye of reason. By it, man learns to direct himself, to be what he ought to be, to do what he ought to do, to head toward his true end. Particular and individual truth is not always a good; it is sometimes an evil, very often an indifferent thing. The things important for a man to know and of which he must be aware to achieve happiness are perhaps not very numerous. But however numerous they are, they are a good which belongs to him, which he has a right to demand wherever he may find it, and which we cannot keep from him without committing the most iniquitous of all robberies, since it is one of those goods common to all and one whose disclosure does not deprive the person who makes it.

As for truths which have no usefulness whatever, neither for instruction nor in practice, how could they be a good which is owed, since they are not even a good? And since property is founded only on usefulness, where there is no possible usefulness, there can be no property. We can claim a piece of ground, however barren, because we can at least live on the soil. But whether an idle fact, indifferent in all regards and without consequence for anybody, be true or false is of no interest to anyone. In the moral order, nothing is useless, any more than in the physical order.[5] Nothing of that which is good for nothing can be owed; for a thing to be owed, it is necessary that it be, or that it may be, useful. Thus, the truth owed is that which concerns justice, and this sacred name of truth is debased if applied to vain things whose existence is indifferent to all and knowledge of which is useless for anything. Truth stripped of every kind of possible usefulness cannot therefore be a thing owed, and consequently he who suppresses it or disguises it does not lie at all.

But are there any of these truths so perfectly sterile as to be in every way useless for everything? That is another matter to discuss, to which I will come back shortly. As for now, let us go on to the second question.

Not to say what is true and to say what is false are two very different things, but the same effect can nonetheless result from them, for the result is assuredly quite the same every time that this effect is null. Wherever the truth is indifferent, the opposing error is also indifferent; from whence it follows that in such a case he who deceives by saying the opposite of the truth is no more unjust than he who deceives by not declaring it; for with useless truths, error is no worse than ignorance. Whether I believe the sand at the bottom of the sea to be white or red matters no more to me than being unaware of what color it is. How could we be unjust when we harm no one, since injustice consists only in the wrong done to someone else?

But to settle these questions in this summary manner still does not furnish me any sure, practical rule without many preliminary explanations necessary for applying it accurately in all cases which may present them-

selves. For if the obligation to tell the truth is founded only on its usefulness, how will I make myself the judge of this usefulness? Very often, what is to one person's advantage is to another person's prejudice; private interest is almost always opposed to public interest. How should we conduct ourselves in such cases? Must what is useful to an absent person be sacrificed to what is useful to the person to whom we are speaking? Must the truth which profits one person while harming another be kept quiet or uttered? Must we weigh everything we say only on the scale of the public good or only on that of distributive justice? And am I confident of understanding all the relationships of the matter well enough so as to apply the insights I possess only according to rules of equity? Moreover, in examining what we owe others have I sufficiently examined what we owe ourselves and what we owe truth for its own sake? If I do no harm to another in deceiving him, does it follow that I do none to myself, and is it sufficient to be never unjust in order to be always innocent?

How many embarrassing discussions we could easily extricate ourselves from by saying: let us always be truthful, whatever comes of it. Justice itself is in the truth of things; a lie is always iniquity; error is deceit whenever we set forth that which is not as the rule of what we ought to do or believe. And whatever consequence results from the truth, we are always blameless when we have told it, because we have put nothing of our own in it.

But that is to settle the question without answering it. The issue was not to declare whether it would always be good to tell the truth, but whether we were always under an equal obligation to do so; and according to the definition I was examining, supposing that we had no obligation, to distinguish the cases in which truth is strictly owed from those in which we can remain quiet about it without injustice and disguise it without lying. For I have found that such cases really existed. The issue, then, is to seek a sure rule for recognizing and accurately determining those cases.

But where can this rule and the proof of its infallibility be come by? . . .[6] In all difficult questions of morality like this, I have always found myself better off answering them according to the ***dictamen*** of my conscience than according to the insights of my reason. Moral instinct has never deceived me: until now, it has remained sufficiently pure in my heart that I can trust it; and if in my conduct it sometimes remains silent in the face of my passions, it soon regains its dominion over them[7] in my memories. It is there that I judge myself with perhaps as much severity as I will be judged by the sovereign judge after this life.

To judge men's speeches by the consequences they produce is usually a poor way to assess their worth. Apart from the fact that these conse-

quences are not always perceptible or easy to recognize, they vary infinitely, as do the circumstances surrounding these speeches. Only the intention of the speaker gives them their worth and determines their degree of malice or goodness. To say what is false is to lie only when there is an intent to deceive; and even an intent to deceive, far from always being joined to an intent to harm, sometimes has an entirely different goal. Still, to make a lie innocent it is not enough that there be no express intent to harm; there must, in addition, be certainty that the error into which those spoken to are thrown can harm neither them nor anyone in any way whatever. It is rare and difficult to come by such certainty; thus it is difficult and rare for a lie to be perfectly innocent. To lie for our own advantage is deceit; to lie for the advantage of another is fraud; to lie in order to harm is slander and is the worst kind of lie. To lie without profit or prejudice to ourselves or another is not to lie: it is not a lie; it is a fiction.

Fictions which have a moral purpose are called allegories or fables; and as their purpose is or ought to be only to wrap useful truths in easily perceived and pleasing forms, in such cases we hardly care about hiding the *de facto* lie, which is only the cloak of truth; and he who merely sets forth a fable as a fable in no way lies.

There are other purely idle fictions such as the greater part of stories and novels which, containing no genuine instruction, have no purpose but amusement. Stripped of all moral usefulness, their worth can be assessed only in terms of the intention of the one who invents them; and when he forcefully sets them forth as real truths, we can scarcely deny that they are true lies. But who has ever had great scruples about those lies and who has ever seriously reproached those who make them? If, for example, there is any moral purpose in the *Temple de Gnide* it is thoroughly obfuscated and spoiled by voluptuous details and lascivious images.[8] What has the author done to cover it with a gloss of modesty? He has pretended that this work was the translation of a Greek manuscript and has fashioned the story about the discovery of this manuscript in the manner most likely to persuade his readers of the truth of his tale. If that is not a very positive lie, then let someone tell me what lying is. But who has taken it into his head to accuse the author of a crime for this lie or to call him a deceiver for it?

In vain will it be said that it is only a joke; that the author, though insisting on it, did not wish to persuade anyone; that, in effect, he persuaded no one; and that the public did not doubt for a moment that he was really the author of the supposedly Greek work of which he passed himself off as the translator. I will reply that if it had no purpose, such a joke was only a very silly and childish prank; that a liar lies no less when he insists, even though he does not persuade; that it is necessary to differentiate between

the learned public and the hordes of simple, credulous readers whom the story of the manuscript, narrated by a serious author with the appearance of good faith, really deceived and who fearlessly drank from a goblet of ancient form the poison of which they would at least have been suspicious had it been presented to them in a modern vessel.

Whether or not these distinctions are found in books, they occur no less in the heart of every man who keeps good faith with himself and who does not want to permit himself anything for which his conscience might reproach him. For to say a false thing to one's own advantage is to lie no less than to say it to the prejudice of another, even though the lie might be less criminal. To give an advantage to one who ought not to have it is to disturb order and justice; to attribute falsely to ourselves or to another an act from which praise or blame, inculpation or exoneration, might result is to do an unjust thing. Now everything which, contrary to the truth, hurts justice in any way whatsoever is a lie. That is the exact limit: but everything which, though contrary to truth, in no way concerns justice is only fiction; and I confess that anyone who blames himself for a pure fiction as if it were a lie has a more delicate conscience than I.

What we call white lies are real lies, because to deceive to the advantage either of another or of ourselves is no less unjust than to deceive to his detriment. Whoever praises or blames contrary to the truth lies whenever a real person is involved. If it involves an imaginary being, he can say whatever he wants about it without lying, unless he judges the morality of the facts he invents and judges falsely: for if he does not then lie about the fact, he lies against moral truth—a hundred times more respectable than that of facts.

I have seen some of these people whom the world calls truthful. All their truthfulness is exhausted in idle conversations where they faithfully cite places, times, and persons; where they do not allow themselves any fiction, do not embroider any circumstances, and exaggerate nothing. In everything not touching their self-interest, they are of the most inviolable fidelity in their narrations. But if it involves speaking about some affair which concerns them or of narrating some fact which touches them closely, all the colors are used so as to present things in the light most advantageous to them. And if a lie is useful to them and they abstain from telling it themselves, they skillfully suggest it and arrange things so that it is adopted without it possibly being imputed to them. Thus wills prudence; good-bye truthfulness.

The man I call *truthful*[9] does just the opposite. In perfectly indifferent things, the truth the other man then respects so strongly concerns him very little; and he will scarcely have scruples about amusing a group of

people with contrived facts from which no unjust judgment results, either for or against anyone living or dead. But every speech which leads to profit or hurt, esteem or scorn, praise or blame for someone, contrary to justice and truth, is a lie which will never approach his heart, his mouth, or his pen. He is solidly *truthful*, even against his self-interest, although he prides himself little enough on being so in idle conversations. He is *truthful* in that he seeks to deceive no one, is as faithful to the truth which indicts him as to the truth which honors him, and never deceives for his advantage or to harm his enemy. The difference, then, between my *truthful* man and the other man is that the world's is very rigorously faithful to every truth which costs him nothing, but not beyond that, whereas mine never serves it so faithfully as when it is necessary to sacrifice himself for it.

But it might be objected: how can this laxness accord with that ardent love for truth for which I glorify him? Is that love false, then, since it admits so much alloy? No, it is pure and true. But it is only an emanation of the love of justice and never wants to be false, even though it is often fictitious. justice and truth are two synonymous words in his mind, and he takes the one for the other indifferently. The holy truth his heart adores does not consist in indifferent deeds and useless names, but in faithfully rendering to each one what is owed in things which are genuinely his own, in imputing good or bad, in making retributions of honor or blame, praise and[10] disapproval. He is not false with respect to someone else, either because his sense of equity keeps him from it and because he does not want to harm anyone unjustly, or in his own favor, because his conscience keeps him from it and because he could not appropriate for himself what is not his own. Above all, he is jealous of his self-esteem; this is the good he can least get along without and he would feel a real loss in acquiring the esteem of others at its expense. He will, therefore, sometimes lie about indifferent things without scruple and without believing he is lying, but never to hurt or profit another or himself. In all that pertains to historic truths, in all that relates to men's conduct, to justice, to sociability, and to useful insights, he will keep himself and others from error as much as it depends on him. Any lie other than that is not one according to him. If the *Temple de Gnide* is a useful work, the story about the Greek manuscript is only a very innocent fiction; it is a lie very worthy of punishment, if the work is dangerous.

Such were my rules of conscience about lying and truth. My heart followed these rules mechanically before my reason had adopted them, and moral instinct alone applied them. The criminal lie of which poor Marion[11] was the victim has left me with ineradicable remorse which for the whole rest of my life has preserved me not only from every lie of this kind

but from all those which could in any way whatever affect another person's interest and reputation. By thus generalizing the exclusion, I have exempted myself from weighing the advantage and prejudice exactly and from marking the precise limits of the harmful lie and of the white lie; in considering the one and the other as blameworthy, I have forbidden myself both.

In this, as in all the rest, my temperament has greatly influenced my maxims or rather my habits. For I have scarcely acted according to rules or in anything scarcely followed any other rule than the impulses of my natural temperament. It never occurred to me to tell a premeditated lie. I have never lied for my self-interest, but I have frequently lied out of shame in order to extricate myself from an embarrassing situation with respect to things which were indifferent or which at the most concerned me alone when, having to keep up a discussion, the slowness of my ideas and the aridity of my conversation forced me to resort to fictions so as to have something to say. When I absolutely have to speak and amusing truths do not come to mind soon enough, I concoct fables so as not to remain mute. But in inventing these fables, I take as much care as I can that they not be lies, that is to say, that they hurt neither the justice nor the truth owed and that they be only fictions indifferent to everyone and to me. It would certainly be my desire to substitute at least a moral truth for the truth of the facts, that is to say, to portray effectively the affections natural to the human heart and always to set forth some useful instruction, to make of them, in a word, moral tales or allegories. But more presence of mind than I have and more facility of speech would be needed to be able to make the babble of conversation benefit instruction. Its pace, more rapid than my ideas and almost always forcing me to speak before thinking, has frequently suggested to me foolish and inappropriate things of which my reason disapproved and which my heart disavowed as soon as they escaped from my mouth, but which, rushing ahead of my own judgment, could no longer be corrected by its censure.

It is still by this first, irresistible impulse of temperament that, in unforeseen and rapid moments, shame and timidity often wrest from me lies in which my will has no part at all, but which somehow rush ahead of it because of the need to reply at the moment. The deep impression of my memory of poor Marion can always fully restrain those which might be harmful to others, but not those which can serve to save me from some embarrassing situation when it is a question of me alone, even though this is no less against my conscience and principles than those which might influence the lot of another.

I swear to Heaven that if in the following instant I could withdraw the

lie which exculpates me and tell the truth, which burdens me without bringing a new insult on my head by my retraction, I would wholeheartedly do it. But the shame of thus catching myself at fault still holds me back, and I repent my fault very sincerely without, however, daring to remedy it. An example will explain better what I wish to say and will show that I lie due to neither interest nor amour-propre, even less due to envy or spite, but solely due to embarrassment and mortification, sometimes knowing very well that this lie is recognized as such and serves me in no way at all.

Some time ago M. Foulquier persuaded me, against my normal practice, to bring my wife along for a Dutch-treat dinner with him and his friend Benoit at Madame Vacassin's, who was a restaurant keeper; she, along with her two daughters, also dined with us.[12] In the middle of the dinner, the eldest, who had recently married and was pregnant, took it into her head to ask me brusquely, staring at me all the while, if I had had any children. Blushing up to my eyes, I replied that I had not had this good fortune. She smiled mischievously while looking at the rest of the group. All that was not very obscure, even for me.

It is first of all clear that this reply is in no way the one I should have wished to make, even if I had intended to deceive; for, given the disposition in which I saw her who addressed the question to me, I was very sure that my negative reply would change nothing in her opinion on this point. They expected this negative reply; they even provoked it so as to enjoy the pleasure of having made me lie. I was not dolt enough not to sense that. Two minutes later, the reply I should have made came to me of itself: "Now that is hardly a discreet question for a young lady to ask a man who has passed his life as a bachelor." By speaking in this way, without lying and without having to blush from any admission, I would have placed the laughers on my side and I would have given her a little lesson which naturally ought to have made her a little less impertinent in questioning me. I did nothing of the sort; I in no way said what should have been said; I said what should not have been said and which could serve me in nothing. Thus it is certain that neither my judgment nor my will dictated my reply, but that it was the mechanical effect of my embarrassment. Previously, I did not have this embarrassment and I would admit my faults with more frankness than shame, because I did not doubt that people saw what redeemed them and what I felt inside myself. But a mischievous eye distresses and disconcerts me: in becoming more unfortunate, I have become more timid, and I have never lied except due to timidity.

I never felt my natural aversion for lying better than when I was writing my *Confessions*; for it is there that temptations would have been frequent

and strong, however little my propensity might have carried me to that side. But far from having kept silent about anything or concealed anything which went against me, by a twist of mind which I have difficulty explaining to myself and which perhaps comes from my estrangement from all imitation, I felt myself more readily inclined to lie in the contrary sense by accusing myself with too much severity than by excusing myself with too much indulgence; and my conscience assures me that one day I will be judged less severely than I have judged myself. Yes, with some proudness of soul, I declare and I feel that in that writing I have carried good faith, veracity, and frankness as far, further even—at least I believe so—than any other man has ever done. Feeling that the good surpassed the evil, it was in my interest to say everything; and I said everything.

I have never said less; I have sometimes said more, not with regard to facts but with regard to circumstances, and this kind of lie was the effect of a delirious imagination rather than an act of will. I am even wrong to call it a lie, for none of these additions was one. I wrote my *Confessions* when I was already old and disgusted with the vain pleasures of life, all of which I had sampled and whose emptiness my heart had thoroughly felt.[13] I wrote them from memory. This memory often failed me or only furnished me imperfect recollections, and I filled in the gaps with details which I dreamed up, details which supplemented these recollections, but which were never contrary to them. I liked to dwell upon the happy moments of my life, and I sometimes embellished them with ornaments that tender regrets furnished me. I spoke of things I had forgotten as it seemed to me they must have been, as they had perhaps been in effect, never contrary to the way I recalled that they had been. I sometimes lent foreign charms to the truth, but I never replaced it with a lie so as to palliate my vices or ascribe virtues to myself.

If, without thinking about it and by an involuntary movement, I sometimes hid my deformed side and depicted my good side, these reticences have been well compensated for by other more bizarre reticences which often made me remain more assiduously silent about the good than about the evil. This is a peculiarity of my natural temperament which it is quite excusable for men not to believe but which, entirely unbelievable as it is, is no less real. I have often told the evil in all its baseness. I have rarely told the good in all its charm and I have often been completely silent about it because it honored me too much and because in making my *Confessions*, I would appear to have made my eulogy. I described my youthful years without vaunting the happy qualities with which my heart was gifted and even suppressing the deeds which placed them too much in evidence. Here, I recall two from my early childhood, both of which indeed came to

mind while I was writing but both of which I rejected solely for the reason I have just mentioned.[14]

Almost every Sunday I used to go spend the day at Les Pâquis at the house of M. Fazy, who had married one of my aunts and who had a cotton print works there.[15] One day I was in the drying house in the calender room, and I was looking at the printing cylinders: their gleam had caught my eye. Tempted to put my fingers on them, I was contentedly running them along the glossy side of the cylinder when young Fazy, having slid inside the wheel, gave it a half-quarter turn so skillfully that he got only the tips of my two longest fingers; but it was enough for them to be crushed at the tip and for both fingernails to remain there. I let out a piercing cry, Fazy instantly turned the wheel back, but my fingernails remained nonetheless attached to the Cylinder and the blood streamed from my fingers. Fazy, dismayed, cried out, jumped out of the wheel, embraced me, and implored me to hush my cries, adding that he was done for. At the height of my suffering, his own touched me; I fell silent; we went to the carp pond where he helped me wash my fingers and stop my bleeding with moss. Tearfully he begged me not to tell on him; I promised him not to and kept my promise so well, that more than twenty years later, no one knew what accident had scarred two of my fingers; for they have always remained so. I was kept in bed for more than three weeks and was unable to use my hand for more than two months, but insisted all the while that a large stone, in falling, had crushed my fingers.

Magnanima menzogna! or quando è il vero
Si bello che si possa a te preporre?[16]

This accident was even more painful for me due to the circumstances, for it was the period of the drills when the bourgeoisie was made to perform maneuvers, and we had formed a squad of three other children of my age, with whom I was supposed to perform the drill in uniform with the company from my neighborhood. I had the sorrow of hearing the company drummer with my three comrades passing under my window while I was in bed.

My other story is very similar, but comes from a more advanced age.

I was playing pall-mall at Plain-Palais with one of my comrades named Pleince.[17] We quarreled about the game, fought with each other, and during the fight he hit my bare head with such a well-placed mallet blow that with a stronger hand he would have knocked my brains out. I fell instantly. I have never in my life seen an agitation similar to that of this poor boy upon seeing my blood streaming through my hair. He thought he had killed me. He threw himself on me, embraced me, and squeezed me tightly

as he burst into tears and uttered piercing cries. I returned his embrace with all my strength, while crying like him in a confused emotion which was not without some tenderness. Finally, he began to try to stop my continued bleeding; and seeing that our two handkerchiefs would not suffice, he led me to his mother who had a little garden near there. This good Lady almost fainted upon seeing me in this state. But she was able to remain strong enough to bandage me; and after having bathed my wound well, she applied iris petals soaked in brandy, an excellent vulnerary much used in our region. Her tears and those of her son penetrated my heart to such an extent that for a long time I considered her as my mother and her son as my brother until having lost sight of both, I forgot them little by little.

I kept the same secret about this accident as about the other, and a hundred others of the same nature have happened to me in my life which I was not even tempted to speak about in my *Confessions*, so little was I seeking a way there to show off the good I felt to be part of my character. No, when I have spoken against the truth which was known to me, it has only been with respect to indifferent things and due more either to the embarrassment of speaking or to the pleasure of writing than to any motive of self-interest or of advantage or prejudice for another. And anyone who reads my *Confessions* impartially, if that ever happens, will sense that the admissions I make there are more humiliating and more painful to make than those about a greater evil which would be less shameful to admit and which I have not admitted because I have not done any.

From all these reflections, it follows that the commitment I made to truthfulness is founded more on feelings of uprightness and equity than on the reality of things, and that in practice I have more readily followed the moral dictates of my conscience than abstract notions of the true and the false. I have frequently concocted fables, but very rarely lied. In following these principles, I have given others many openings to criticize me. But I have wronged no one at all, and I have never given myself any more of an advantage than was due me. It is solely in that, it seems to me, that truth is a virtue. In every other respect it is only a metaphysical entity for us from which neither good nor evil results.

I do not, however, feel my heart to be sufficiently satisfied with these distinctions as to believe myself entirely irreprehensible. In weighing so carefully what I owed others, have I sufficiently examined what I owed myself? If it is necessary to be just to others, it is necessary to be true to oneself: that is an homage an honest man should render to his own dignity. When the sterility of my conversation forced me to make up for it with innocent fictions, I erred, because to amuse someone else, we should in no way degrade ourselves; and when, carried away by the pleasure of

writing, I added invented ornaments to real things, I erred even more, because to adorn truth with fables is, in effect, to disfigure it.

But what makes me more inexcusable is the motto I had chosen. This motto obligated me more than any other man to a strict commitment to the truth, and it was not enough for me to sacrifice my interest and my inclinations to it in all things; I should also have sacrificed my weakness and my timid natural temperament to it. I should have had the courage and the strength to be truthful always, on every occasion, and never to let fictions or fables come out of a mouth and a pen which had been specifically consecrated to the truth. That, indeed, is what I should have said to myself upon adopting this proud motto and should always have repeated to myself as long as I dared to keep it. Never has falseness dictated my lies to me; they have all come from weakness; but that excuses me very little. With a weak soul we can at the most preserve ourselves from vice; but to dare to profess great virtues is to be arrogant and rash.

Those indeed are the reflections which would probably never have come to my mind if the Abbé Rosier had not suggested them to me. It is undoubtedly very late to make use of them; but at least it is not too late to set my error straight and bring my will back in line: for henceforth that is all that depends on me. In this, then, and in all similar things, Solon's maxim[18] is applicable to all ages, and it is never too late to learn, even from one's enemies, to be wise, true, modest, and to presume less of oneself.

Fifth Walk

Of all the places I have lived (and I have lived in some charming ones),[1] none has made me so genuinely happy nor left me such tender regrets as St. Peter's Island in the middle of Lake Bienne. This small island, which is called Hillock Island in Neuchâtel, is quite unknown, even in Switzerland. As far as I know, no traveler mentions it. However, it is very pleasant and singularly placed for the happiness of a man who likes to cut himself off; for although I am perhaps the only one in the world whose destiny has imposed this on him as a law, I cannot believe myself to be the only one who has so natural a taste—even though I have not found it in anyone else thus far.

The banks of Lake Bienne are wilder and more romantic than those of Lake Geneva, because the rocks and woods border the water more closely; but they are not less cheerful. If the fields and vineyards are less cultivated, and if there are fewer towns and houses, there is also more natural greenery, more meadows, grove-shaded retreats, more frequent contrasts, and more variety in the terrain. As there are no large thoroughfares suitable for coaches on these happy shores, the countryside is seldom frequented by travelers; but it is interesting for solitary contemplators who like to become intoxicated with the charms of nature at leisure and collect their thoughts in a silence troubled by no noise other than the cry of eagles, the intermittent chirping of a few birds, and the rushing of torrents as they fall from the mountain. This beautiful basin almost circular in form has two small Islands in its center, one inhabited and cultivated, almost half a league around; the other smaller, uninhabited, and uncultivated, and which will ultimately be destroyed because earth is constantly taken away from it to repair the destruction waves and storms make to the large one. Thus it is that the substance of the weak is always used for the advantage of the powerful.

On the Island there is only a single house, but a large, pleasant, and comfortable one which, like the Island, belongs to Bern Hospital and in which a Tax Collector lives with his family and servants. He maintains a large farmyard, a pigeon house, and fishponds. Despite its smallness the Island is so varied in its terrain and vistas that it offers all kinds of landscapes and permits all kinds of cultivation. You can find fields, vineyards,

woods, orchards, and rich pastures shaded by thickets and bordered by every species of shrubbery, whose freshness is preserved by the adjacent water. A high terrace planted with two rows of trees runs the length of the Island, and in the middle of this terrace a pretty reception hall has been built where the inhabitants of the neighboring banks gather and come to dance on Sundays during harvests.

This is the Island on which I sought refuge after the stoning at Môtiers.[2] I found the sojourn on it so charming, I led a life there so suitable to my temper that, resolved to end my days there, I had no worry other than their not letting me execute this project which did not fit in with the one of transporting me to England—a project whose first effects I was already feeling.[3] Because of the forebodings that troubled me, I wanted them to make this refuge a perpetual prison for me, to confine me to it for life, and —removing every possibility and hope of getting off it—to forbid me any kind of communication with the mainland so that being unaware of all that went on in the world I might forget its existence and that it might also forget mine.

They let me spend scarcely two months on this Island,[4] but I would have spent two years there, two centuries, and the whole of eternity without being bored for a moment, even though besides my helpmate, I had no companionship there other than that of the Tax Collector, his wife, and his servants, who in truth were all very worthy people but nothing more; but that was precisely what I needed. I consider these two months the happiest time of my life, so happy that it would have contented me for my whole existence without the desire for another state arising for a single instant in my soul.

Now what was this happiness and in what did its enjoyment consist? From the description of the life I led there, I will let all the men of this century guess at it. The precious *far niente*[5] was the first and the principal enjoyment I wanted to savor in all its sweetness, and all I did during my sojourn was in effect only the delightful and necessary pursuit of a man who has devoted himself to idleness.

The hope that they would ask for nothing better than to leave me in this isolated spot where I had ensnared myself on my own, which it was impossible for me to leave without help and surely without being noticed, and where I could have communication or correspondence only by the assistance of the people who surrounded me, this hope, I say, led me to hope I would end my days there more peacefully than I had spent them until then. And the idea that I would have time to adapt myself to it in complete leisure caused me to begin by not adapting at all. Transported there abruptly, alone, and destitute, I had my Housekeeper, my books,

and my few furnishings brought over, one after the other. And I had the pleasure of unpacking nothing, leaving my boxes and my trunks as they had arrived and living in the abode in which I counted on finishing my days as in an inn I would have to leave on the following day. All things, such as they were, went along so well that to want to arrange them better would have been to spoil something. Above all, one of my greatest delights was to leave my books well packed up and to have no writing table. When wretched letters forced me to take up a pen to reply, I grudgingly borrowed the Tax Collector's writing table and then hastened to return it, in the vain hope of not needing to borrow it again. Instead of depressing papers and heaps of old books, I filled my room with flowers and dried plants; for I was then in my first Botanical fervor for which Dr. d'Ivernois[6] had given me an inclination and which soon became a passion. Wanting no more toilsome work, I needed something amusing which would please me and require only as much trouble as a lazy man likes to take. I set about doing the Flora petrinsularis[7] and describing all the plants of the Island, without omitting a single one, in sufficient detail to occupy myself for the rest of my days. It is said that a German did a book about a lemon peel; I would have done one about each type of hay of the meadows, each moss of the woods, each lichen that carpets the rocks; in short, I did not want to leave a blade of grass or a plant particle which was not amply described. As a result of this fine project, every morning after breakfast, which we all had together, I would go off, a magnifying glass in hand and my *Systema naturae*[8] under my arm, to visit a district of the Island, which I had divided into small squares for this purpose, with the intention of covering them one after the other in each season. Nothing is more singular than the raptures and ecstasies I felt with each observation I made on plant structure and organization, as well as on the role of the sexual parts in sporulation, which was then a completely new system for me. I was enchanted to distinguish generic features of which I previously had not the slightest idea and to verify them on common species, while waiting for rarer ones to offer themselves to me. The forking of the two long stamens of the Self-heal, the spring of those of the Nettle and the Pellitory, the explosion of the fruit of the Balsam and the pod of the Boxwood, a thousand little games of sporulation which I observed for the first time, filled me with joy and I went around asking whether one had seen the horns of the Self-heal plant like La Fontaine asking whether one had read Habakkuk.[9] At the end of two or three hours I would come back laden with an ample harvest, a stock with which to amuse myself after lunch in the lodging in case of rain. I would use the rest of the morning to go with the Tax Collector, his wife, and Thérèse to visit their workers and their crops, quite often joining my hand

with theirs in work; and often the residents of Bern who came to see me found me perched in large trees, girdled with a sack that I would fill with fruits and then lower to the ground with a rope. My morning exercise and the good temper which is inseparable from it made the pause for lunch very enjoyable. But when it took too long and good weather beckoned, I could not wait so long. While they were still at the table, I would slip away and go throw myself alone into a boat that I rowed to the middle of the lake when the water was calm; and there, stretching myself out full-length in the boat, my eyes turned to heaven, I let myself slowly drift back and forth with the water, sometimes for several hours, plunged in a thousand confused, but delightful, reveries which, even without having any well-determined or constant object, were in my opinion a hundred times preferable to the sweetest things I had found in what are called the pleasures of life. Often, warned by the setting of the sun that it was the hour of retreat, I would find myself so far from the Island that I was forced to work with all my might to get back before nightfall. Other times, instead of heading out to open water, I took pleasure in gliding along the verdant banks of the Island where the limpid waters and fresh shadows often induced me to bathe. But one of my most frequent sailings was from the large to the small Island. There I would debark and spend the afternoon, sometimes in very limited promenades through great round-leaved Sallow, Alder-buckthorn, Willow weed, shrubs of every sort, and sometimes setting myself on the summit of a sandy knoll covered with grass, common thyme, flowers, even cockscomb and clover that had most likely been sown there some time ago and were very suitable for housing rabbits which could multiply in peace there without fearing anything and without doing any harm. I passed this idea on to the Tax Collector who had male and female Rabbits brought from Neuchâtel, and in great pomp his wife, one of his sisters, Thérèse, and I went to settle them on the small Island where they began to breed before my departure and where they will undoubtedly have thrived, if they have been able to withstand the rigor of the winters. The founding of this little Colony was a festival. The pilot of the Argonauts[10] was no prouder than I, leading the company and the rabbits in triumph from the large Island to the small. And I noted with pride that the Tax Collector's wife, who dreaded water excessively and always felt uncomfortable upon it, embarked under my leadership with confidence and showed no fear during the crossing.

When the lake was too rough for boating, I would spend my afternoon wandering over the Island searching right and left for plants, sometimes sitting down in the most cheerful and solitary nooks to dream at my ease and sometimes on terraces and knolls to let my eyes wander over the su-

perb and breathtaking view of the lake and its shores, crowned on one side by the nearby mountains and on the other spread out onto rich and fertile plains over which my sight extended all the way up to the more distant, bluish mountains which bordered it.

When evening approached, I would come down from the heights of the Island and gladly go sit in some hidden nook along the beach at the edge of the lake. There, the noise of the waves and the tossing of the water, captivating my senses and chasing all other disturbance from my soul, plunged it into a delightful reverie in which night would often surprise me without my having noticed it. The ebb and flow of this water and its noise, continual but magnified at intervals, striking my ears and eyes without respite, took the place of the internal movements which reverie extinguished within me and was enough to make me feel my existence with pleasure and without taking the trouble to think. From time to time some weak and short reflection about the instability of things in this world arose, an image brought on by the surface of the water. But soon these weak impressions were erased by the uniformity of the continual movement which lulled me and which, without any active assistance from my soul, held me so fast that, called by the hour and agreed-upon signal, I could not tear myself away without effort.

After supper, when the evening was fine, we would all go for a little walk together on the terrace to breathe in the air and the freshness of the lake. We would relax in the pavilion, laugh, chat, sing some old song which was easily as good as the modern rigmarole, and finally go to bed content with our day desiring only a similar one the next day.

Leaving aside unexpected and importunate visits, this is the way I spent my time on this Island during my sojourn there. Tell me now what is so alluring about it as to arouse such intense, tender, and lasting regrets in my heart that at the end of fifteen years[11] it is impossible for me to think of that cherished abode without each time feeling myself carried away again by waves of desire.

In the vicissitudes of a long life, I have noticed that the periods of sweetest enjoyment and most intense pleasures are, nevertheless, not those whose recollection most attracts and touches me. Those short moments of delirium and passion, however intense they might be, are, even with their intensity, still only scattered points along the path of life. They are too rare and too rapid to constitute a state of being; and the happiness for which my heart longs is in no way made up of fleeting instants, but rather a simple and permanent state which has nothing intense in itself but whose duration increases its charm to the point that I finally find supreme felicity in it.

Everything is in continual flux on earth. Nothing on it retains a constant and static form, and our affections, which are attached to external things, necessarily pass away and change as they do. Always ahead of or behind us, they recall the past which is no longer or foretell the future which often is in no way to be: there is nothing solid there to which the heart might attach itself. Thus, here-below we have hardly anything but transitory pleasure. As for happiness which lasts, I doubt that it is known here. In our most intense enjoyments, there is hardly an instant when the heart can genuinely say to us: *I would like this instant to last forever.*[12] And how can we call happiness a fleeting state which leaves our heart still worried and empty, which makes us long for something beforehand or desire something else afterward?

But if there is a state in which the soul finds a solid enough base to rest itself on entirely and to gather its whole being into, without needing to recall the past or encroach upon the future; in which time is nothing for it; in which the present lasts forever without, however, making its duration noticed and without any trace of time's passage; without any other sentiment of deprivation or of enjoyment, pleasure or pain, desire or fear, except that alone of our existence, and having this sentiment alone fill it completely; as long as this state lasts, he who finds himself in it can call himself happy, not with an imperfect, poor, and relative happiness such as one finds in the pleasures of life, but with a sufficient, perfect, and full happiness which leaves in the soul no emptiness it might feel a need to fill. Such is the state in which I often found myself during my solitary reveries on St. Peter's Island, either lying in my boat as I let it drift with the water or seated on the banks of the tossing lake; or elsewhere, at the edge of a beautiful river or of a brook murmuring over pebbles.

What do we enjoy in such a situation? Nothing external to ourselves, nothing if not ourselves and our own existence. As long as this state lasts, we are sufficient unto ourselves, like God. The sentiment of existence, stripped of any other emotion, is in itself a precious sentiment of contentment and of peace which alone would suffice to make this existence dear and sweet to anyone able to spurn all the sensual and earthly impressions which incessantly come to distract us from it and to trouble its sweetness here-below. But most men, agitated by continual passions, are little acquainted with this state and, having tasted it only imperfectly for a few moments, preserve only an obscure and confused idea of it which does not let them feel its charm. It would not even be good in the present structure of things that, avid for these sweet ecstasies, they should become disgusted with the active life their ever recurring needs prescribe to them as a duty. But an unfortunate person who has been cut off from human society

and who can no longer do anything here-below useful and good for another or for himself can find compensations for all the human felicities in this state, compensations which fortune and men could not take away from him.

It is true that these compensations cannot be felt by all souls nor in all situations. The heart must be at peace and no passion come to disturb its calm. The one who experiences them must be well disposed to them, as must be the conjunction of the surrounding objects. What is needed is neither absolute rest nor too much agitation, but a uniform and moderated movement having neither jolts nor lapses. Without movement, life is only lethargy. If the movement is irregular or too strong, one is awakened. By reminding us of the surrounding objects, it destroys the charm of the reverie and tears us away from within ourselves, bringing us instantly back under the yoke of fortune and men and returning us to feeling our misfortunes. An absolute silence leads to sadness. It offers an image of death. Then the assistance of a cheerful imagination is necessary and comes naturally enough to those whom Heaven has favored. Movement which does not come from outside then occurs inside us. One rests less, it is true, but also more pleasurably, when light and sweet ideas only skim the surface of the soul, so to speak, without disturbing its depths. Only enough ideas are needed to remember our own self while forgetting all our troubles. This kind of reverie can be enjoyed wherever we can be quiet, and I have often thought that in the Bastille—even in a dungeon where no object would strike my sight—I would still have been able to dream pleasurably.

But admittedly that was done better and more pleasurably on a fertile and solitary Island, naturally closed-off and separated from the rest of the world, where nothing but cheerful images came to me; where nothing recalled depressing memories to me; where the society of the small number of inhabitants was gentle and sweet, without being so interesting as to occupy me continuously; where I could, in short, give myself up all day long to the preoccupations of my liking or to luxurious idleness, without hindrance and care. It was undoubtedly a perfect occasion for a dreamer who, knowing how to nourish himself with pleasurable fancies in the middle of the most unpleasant objects, could satiate himself with them at his ease by making everything which really struck his senses come together in them. Upon emerging from a long and sweet reverie, upon seeing myself surrounded by greenery, flowers, and birds, and letting my eyes wander in the distance on the romantic shores which bordered a vast stretch of crystal-clear water, I assimilated all these lovely objects to my fictions; and finally finding myself brought back by degrees to myself and to what surrounded me, I could not mark out the point separating the fictions from the reali-

ties; it was this thorough conjunction of everything which made the absorbed and solitary life I led during this beautiful sojourn so dear to me. If it could only occur again! If I could only go end my days on this beloved Island without ever coming off it or ever seeing there any inhabitant of the continent to remind me of all the different calamities they have taken pleasure in heaping on me for so many years! They would soon be forever forgotten. Undoubtedly, they would not likewise forget me. But what would that matter to me, provided they had no way to come there to disturb my rest? Delivered from all the earthly passions the tumult of social life engenders, my soul would frequently soar up above this atmosphere and commune in advance with the celestial intelligences whose number it hopes to augment in a short while. I know men will be careful not to give me back such a sweet refuge when they did not want to leave me there. But at least they will not prevent me from transporting myself there each day on the wings of my imagination and from enjoying for a few hours the same pleasure as if I were still living there. The sweetest thing I would do would be to dream there at my ease. In dreaming that I am there, do I not do the same thing? I do even more: to the allure of an abstract and monotonous reverie, I join charming images which make it more intense. In my ecstasies, their objects often eluded my senses. Now the deeper my reverie is, the more intensely it depicts them to me. I am often more in the midst of them and even more pleasantly so than when I was really there. The misfortune is that to the extent that my imagination cools this comes with more labor and does not last as long. Alas! it is when we begin to leave our skin that it hinders[13] us the most.

Sixth Walk

There is hardly any of our automatic impulses whose cause we could not find in our heart, if we only knew how to look for it.[1] Yesterday, crossing the new boulevard to go look for plants on the Gentilly side of the Bièvre, I made a turn to the right in coming up to the Enfer tollgate and, getting out into the countryside, I went along the road to Fontainebleau up to the bluffs beside this little river.[2] In itself, this route was of no significance; but on recalling that I had automatically made the same detour several times, I looked within myself for its cause and I could not keep from laughing when I managed to unravel it.

At a corner of the boulevard near the Enfer tollgate exit, there is a woman who sets up a stand every day in the summer to sell fruit, herb tea, and rolls. This woman has a very nice, but lame little boy who, hobbling along on his crutches, goes about quite graciously asking passersby for alms. I had become slightly acquainted with this little fellow; each time I passed, he did not fail to come pay his little compliment, always followed by my little offering. At first I was charmed to see him; I gave to him very good heartedly and for some time continued to do so with the same pleasure, quite frequently even prompting and listening to his little prattle which I found enjoyable. This pleasure, having gradually become a habit, was inexplicably transformed into a kind of duty I soon felt to be annoying, especially because of the preliminary harangue to which I had to listen and in which he never failed to call me Monsieur Rousseau many times, to show that he knew me well. But to the contrary, that only taught me that he knew me no more than those who had instructed him. From that time on I passed by there less willingly and finally I automatically got in the habit of making a detour when I came close to this crossing.

That is what I discovered by reflecting on it; for until then, none of this had clearly entered my thoughts. This observation recalled to me a multitude of others, one after the other, which entirely convinced me that the true and primary motives of most of my actions are not as clear even to me as I had long imagined. I know and feel that to do good is the truest happiness the human heart can savor; but it is a long time now since this happiness has been put out of my reach, and it is not in such a wretched lot as mine that one can hope to perform selectively and fruitfully a single

really good action. The greatest care of those who rule my fate having been to make everything appear only false and deceptive to me, an occasion for virtue is never anything but a lure they hold out to draw me into the snare they want to enlace me in. I know that; I know that the only good which might henceforth be within my power is to abstain from acting, from fear of doing evil without wanting to and without knowing it.

But there were happier times when, following the impulses of my heart, I could sometimes make another heart content; and I owe myself the honorable testimony that, whenever I was able to savor this pleasure, I found it sweeter than any other. This tendency was intense, true, pure, and nothing in my most secret inner self ever belied it. However, I have often felt the burden of my own good deeds by the chain of duties they later entailed. Then the pleasure disappeared, and the continuation of the very attentiveness which had charmed me at first no longer struck me as anything but an almost unbearable annoyance. During my brief moments of prosperity, many people appealed to me; and despite the multitude of favors they asked of me, none of them was ever turned away. But from these first good deeds, which my heart poured out effusively, were forged chains of subsequent liabilities I had not foreseen and whose yoke I could no longer shake off. In the eyes of those who received them, my first favors were only a down payment for those which were supposed to follow; and as soon as some unfortunate man had hooked me with my own good deed, that was it from then on. This first free and voluntary good deed became an unlimited right to all those he might need afterward, without even my lack of power being enough to release me from his claim. That is how very delightful enjoyments were transformed into onerous subjections for me ever afterward.

However, these chains did not appear very burdensome to me as long as I lived in obscurity, unknown to the public. But once my person was advertised by my writings—a serious fault without a doubt, but more than expiated by my misfortunes—from that time I became the general inquiry office for all destitute or self-styled destitute people; for all adventurers looking for dupes; for all those who, under the pretext of the great authority they pretended to attribute to me, wanted to influence me in some manner or another. It is then that I came to understand that all natural tendencies, including beneficence itself, carried out or followed imprudently and indiscriminately in society, change their nature and frequently become as harmful as they were useful in their first direction. A number of cruel experiences changed my original inclinations little by little; or rather, eventually confining them within their genuine limits, they taught me to follow my tendency to do good less blindly, when it served only to favor the wickedness of others.

But I regret these experiences in no way, since through reflection they have given me new insights into knowledge of myself and into the true motives for my conduct in a thousand circumstances I have so often deluded myself about. I saw that to do good with pleasure, it was necessary for me to act freely, without constraint, and that to take all the delight in a good act away from me, it was sufficient for it to become a duty for me. From then on the weight of obligation makes the sweetest enjoyments a burden for me, and as I have said in the *Emile*—or so I believe—I would have been a bad husband among the Turks at the hour that the public cry calls them to fulfill the duties of their condition.[3]

This is what greatly modifies the opinion I long had of my own virtue; for there is none at all in following our inclinations and in giving ourselves the pleasure of doing good when they lead us to do so. But virtue consists in overcoming them when duty commands in order to do what duty prescribes, and that is what I have been less able to do than any man in the world. Born sensitive and good, full of pity to the point of weakness, and feeling my soul exalted by everything which relates to generosity, I liked, even passionately liked, being humane, beneficent, and helpful, as long as only my heart was involved. I would have been the best and the most merciful of men if I had been the most powerful; and to extinguish any desire for vengeance within me, it would have sufficed for me to be able to avenge myself. I would even have been just against my self-interest without any difficulty, but I could not have resolved to be so against that of those who were dear to me. From the moment my duty and my heart were in conflict, the first was rarely the victor unless all I had to do was abstain. Then, I was strong for the most part. But to act against my inclination was always impossible for me. Whether it be men, duty, or even necessity commanding, when my heart is silent, my will remains deaf, and I am unable to obey. I see the evil which threatens me, and I allow it to occur rather than exert myself to forestall it. With effort, I sometimes start to, but this effort very quickly wearies and exhausts me; I am unable to continue. In everything imaginable, what I do not do with pleasure soon becomes impossible for me to do.

There is more. Constraint, though in harmony with my desire, suffices to annihilate it and to change it into repugnance, even into aversion, as soon as it functions too strongly; and that is what makes painful for me the good action which is demanded of me and which I did of my own accord as long as it was not demanded. A purely spontaneous good deed is certainly an action I love to perform. But when the one who has received it transforms it into a claim and exacts its continuation under penalty of his hatred, when he makes it a law for me to be his benefactor forever for my having at first taken pleasure in helping him, from that point annoyance begins and plea-

sure vanishes. What I do then when I yield arises from weakness and mortification, but good will is no longer in it; and far from applauding myself for it within, my conscience scolds me for doing good reluctantly.

I know that there is a kind of contract, and even the holiest of all, between the benefactor and the beneficiary. They form a sort of society with each other, more restricted than the one which unites men in general. And if the beneficiary tacitly pledges himself to gratitude, the benefactor likewise pledges himself to preserve for the other, as long as he does not make himself unworthy of it, the same good will he has just shown him and to renew its acts for him whenever he is able to and whenever it is required. Those are not stated conditions, but they are natural effects of the relationship which has just been set up between them. He who refuses a spontaneous favor the first time it is asked of him gives the one he has refused no right to complain. But he who, in a similar case, refuses the same person the same kindness he heretofore accorded him, frustrates a hope he has authorized him to conceive. He deceives and belies an expectation he has engendered. In this refusal, we feel an inexplicable injustice and greater harshness than in the other; but it is no less the effect of an independence the heart loves and renounces only with effort. When I pay a debt, it is a duty I fulfill; when I give a gift, it is a pleasure I give myself. Now, the pleasure of fulfilling our duties is one of those that only the habit of virtue engenders; those which come to us immediately from nature do not rise so high.

After so many sad experiences, I have learned to anticipate the consequences of my first constant impulses and I have often abstained from a good action I had the desire and the power to do, frightened of the subjection I would submit myself to afterward if I yielded to it without reflection. I have not always felt this fear. To the contrary, in my youth I obtained friends by my own good deeds. Even so, I have often sensed that those whom I benefited became friendly toward me through gratitude even more than through self-interest. But in this respect, as in all others, things completely changed countenance as soon as my misfortunes began. From that time on I have lived among a new generation that does not resemble the former at all, and with the change in the feelings of others toward me came a change in my own feelings toward them. The same people I saw in each of these two vastly different generations have, so to speak, adapted themselves to each one in succession.[4] Thus it is that the Comte des Charmettes,[5] for whom I had such a tender esteem and who liked me so sincerely, made his relatives Bishops by becoming one of the workers in the Choiseulian maneuvers.[6] Thus it is that the good Abbé Palais,[7] formerly my debtor and my friend, a fine and honest boy in his youth, has

procured himself a post in France by becoming treacherous and false with regard to me. Thus it is that the Abbé de Binis,[8] who was my undersecretary in Venice and who always showed me the attachment and esteem which my conduct should naturally have inspired in him, was able to gain handsome benefits[9] at the expense of his conscience and of truth by opportunely changing language and demeanor in his self-interest. Moultou[10] himself has changed from white to black. From true and candid as they were at first, having become what they are, they have done as all the others; and simply because the times have changed, men have changed with them. Humph! how could I keep the same feelings for those in whom I find the opposite of what engendered those feelings? I do not hate them, because I cannot hate; but I cannot refrain from the scorn they merit or abstain from attesting to it.

Perhaps without noticing it I, too, have changed more than necessary. What natural temperament could resist a situation similar to mine without being altered? Convinced by twenty years of experience that everything in the way of happy dispositions which nature has put in my heart has been turned to the prejudice of myself or of others by my fate and by those who dispose of it, I can no longer consider a good action which they offer me to do as anything but a snare tendered me under which some evil is hidden.[11] I know that whatever the effect of the action might be, I will nonetheless have my good intention as a reward. Yes, this reward is undoubtedly still there, but the inner charm is no longer there; and as soon as this stimulant fails me, I feel only indifference and ice within myself. Certain that instead of performing a truly useful action I only act like a dupe, amour-propre's indignation joined to reason's disavowal inspires in me only repugnance and resistance, whereas in my natural condition I would have been full of ardor and zeal.

Some kinds of adversity elevate and strengthen the soul, but some strike it down and kill it; such is the one to which I am prey. Whatever small amount of bad leavening there might have been in my own soul, my adversity might have made it ferment excessively or have made me frenetic; but it has only made me ineffectual. Unable to do good either for myself or for others, I abstain from acting; and this condition, which is innocent only because it is compulsory, makes me find a sort of delight in yielding fully and without reproach to my natural inclination. I undoubtedly go too far, since I avoid occasions to act even where I see only good to do. But certain that I am not allowed to see things as they are, I abstain from judging according to the appearances they are given; and with whatever lure the motives for acting are covered, it is enough that these motives be left within my reach for me to be sure they are deceitful.

From childhood on, my fate seems to have tendered the first snare which long made me so apt to fall into all the others. I was born the most trusting of men, and for forty whole years this trust was never once betrayed.[12] Having suddenly fallen into another order of people and things, I stumbled into a thousand traps without ever noticing any of them; and twenty years of experience have barely sufficed to enlighten me about my lot. Once convinced that there was only lying and falseness in the dissembling way they fawned over me, I rapidly passed over to the other extreme: for when we have once abandoned our natural temperament, there are no longer any limits to hold us back. Ever since then I have been disgusted with men, and my will, concurring with theirs in this respect, keeps me even more removed from them than all their machinations do.

No matter what they do, this repugnance will never go to the point of aversion. In thinking about how they have made themselves dependent on me in order to make me dependent on them they move me to real pity. If I am not unhappy, they are; and each time I turn back into myself, I always find them to be pitied. Perhaps pride is still mingled with these judgments: I feel I am too much above them to hate them. At the very most they can concern me to the point of scorn, but never to the point of hatred: in short, I love myself too much to be able to hate anyone whatever. That would be to constrict or repress my existence, and I would rather extend it over the whole universe.

I prefer to flee them than to hate them. The sight of them affects my senses, and thereby my heart, with painful impressions brought on by the thousand cruel ways they stare at me; but the uneasiness ceases as soon as the object which causes it has disappeared. I become concerned about them quite in spite of myself because of their presence, but never because of remembering them. When I no longer see them, it is as if they did not exist.

I am not really indifferent about them, except in what relates to me; for in their relations among themselves, they can still concern and move me as would the characters in a Drama I might see performed. My moral being would have to be annihilated for justice to become unimportant to me. The sight of injustice and wickedness still makes my blood boil with rage. Acts of virtue in which I see neither boastfulness nor ostentation always make me quiver with joy and still wring sweet tears from me. But I must see and appreciate them myself, for after my own history I would have to be insane to adopt the judgment of men about anything whatever or to believe anything on the word of others.

If my face and my features were as perfectly unknown to men as my character and natural temperament are, I would still live in the midst of them without difficulty. Even association with them could please me as

long as I were a complete stranger to them. Unrestrainedly indulging in my natural inclinations, I would still love them even if they never took any interest in me. I would practice a universal and perfectly disinterested benevolence toward them; but without ever forming any individual attachment and without bearing the yoke of duty, I would do unto them—freely and of myself—everything which, moved by their amour-propre and constrained by all their laws, they have so much difficulty doing.

If I had remained free, obscure, and isolated as I was made to be, I would have done only good; for I do not have the seed of any harmful passion in my heart. If I had been invisible and all-powerful like God, I would have been beneficent and good like Him. It is strength and freedom which make excellent men. Weakness and slavery have never made anything but wicked ones. If I had been the possessor of the ring of Gyges,[13] it would have freed me from dependence on men and made them dependent on me. In my castles in Spain, I have often asked myself what use I would have made of this ring; for it is surely here that the temptation to abuse would be close to the power to do so. Master of contenting my desires, able to do anything without anybody being able to fool me, what could I have reasonably desired? One thing alone: that would have been to see every heart content. Only the sight of public felicity could have affected my heart with a permanent feeling, and the ardent desire to contribute to it would have been my most constant passion. Always just without partiality and always good without weakness, I would have preserved myself both from blind distrust and from implacable hatred. For, seeing men as they are and easily reading to the depths of their hearts, I would have found few of them amiable enough to deserve all of my affections and few odious enough to deserve all of my hatred; and their very wickedness would have disposed me to pity them, due to the certain knowledge of the evil they do to themselves in wishing to do it to others. Perhaps in moments of lightheartedness, I would have been childish enough to perform an occasional prodigy; but, perfectly disinterested with respect to myself and having only my natural inclinations as law, for a few acts of severe justice I would have performed a thousand merciful and equitable ones. Minister of Providence and dispenser of its laws according to my power, I would have performed miracles wiser and more useful than those of the Golden Legend[14] and the tomb of St. Médard.[15]

On one point alone the ability to penetrate everywhere invisibly might have made me seek temptations I would have poorly resisted; and once straying onto these paths of aberration, where would I not have been led by them? To flatter myself that these advantages would not have seduced me or that reason would have stopped me from this fatal bent would be to

understand nature and myself quite poorly. Sure of myself on every other count, that one alone would have done me in. Anyone whose power puts him above other men ought to be above human weaknesses; otherwise, this excess of strength will in effect serve only to put him below others and below what he himself would have been had he remained their equal.

All things considered, I believe I will do better to throw away my magic ring before it makes me commit some folly. If men persist in seeing me as the complete opposite of what I am and if the sight of me provokes their injustice, I must flee them to deprive them of this sight, not disappear from their midst. It is for them to hide themselves from me, to conceal their maneuvers from me, to flee the light of day, and to bury themselves in the earth like Moles. As for me, let them see me if they can; so much the better. But that is impossible for them. They will never see in my place anyone but the Jean-Jacques[16] they have made for themselves and made to their heart's desire to hate at their ease. I would therefore be wrong to be affected by the way they see me. I ought to take no genuine interest in it, for it is not I whom they see in this way.

The conclusion I can draw from all these reflections is that I have never been truly suited for civil society where everything is annoyance, obligation, and duty and that my independent natural temperament always made me incapable of the subjection necessary to anyone who wants to live among men. As long as I act freely, I am good and do only good. But as soon as I feel the yoke either of necessity or of men, I become rebellious, or rather, recalcitrant; then I am ineffectual. When it is necessary to do what is opposite to my will, I do not do it at all, no matter what; I do not even do what accords with my will, because I am weak. I abstain from acting, for all of my weakness is with regard to action, all of my strength is negative, and all of my sins are of omission, rarely of commission. I have never believed that man's freedom consisted in doing what he wants, but rather in never doing what he does not want to do; and that is the freedom I have always laid claim to, often preserved, and most scandalized my contemporaries about. Because, as for them—busy, restless, ambitious, detesting freedom in others and not wanting any for themselves, provided that they sometimes do what accords with their will, or rather, that they dominate the will of others—they torment themselves their whole life long by doing what is loathsome to them; they omit nothing servile in order to command. Their wrong, then, was not to turn me out of society as a useless member, but to proscribe me from it as a pernicious member. For I admit that I have done very little good; but as for evil, my will has never in my life entertained it, and I doubt that there is any man in the world who has really done less of it than I.

Seventh Walk

The collection of my long dreams is scarcely begun, and I already feel it is near its end. Another pastime takes its place, absorbs me, and even deprives me of the time to dream. I give myself up to it with an infatuation which partakes of extravagance and which makes even me laugh when I think about it; but I give myself up to it nonetheless, because in my present situation, I no longer have any other rule of conduct than in everything to follow my propensity without restraint. I can do nothing about my lot. I have only innocent inclinations; and all the judgments of men being null for me henceforth, wisdom itself wills that in what remains within my reach I do whatever gratifies me, either in public or alone, without any rule other than my fancy and any limit other than the little strength I have left. Here I am, then, with hay as my only nourishment and botany as my only preoccupation. I was already old when I had my first smattering of it in Switzerland with Dr. d'Ivernois; and during my travels I had so happily looked for plants that I acquired a tolerable acquaintance with the vegetable realm. But having become more than a sexagenarian, having become sedentary in Paris, strength for extensive plant excursions beginning to fail me, and, moreover, sufficiently given up to my music copying so as not to need any other preoccupation, I had abandoned this pastime which I no longer needed. I had sold[1] my herbarium, I had sold my books, content to see again from time to time the common plants I found on the outskirts of Paris during my walks. During this interval, the little that I knew was almost entirely erased from my memory, much more rapidly than it had become engraved upon it.

All of a sudden at the age of sixty-five plus, deprived of the little memory I used to have and of my remaining strength to wander around the countryside, without a guide without books, without a garden, without a herbarium, here I am caught up again in this folly, but with still more ardor than I had in giving myself up to it the first time. Now I am seriously preoccupied with the prudent project of learning Murray's whole *Regnum vegetabile*[2] by heart and of becoming acquainted with all the known plants on earth. Unable to buy any botany books again, I set myself the task of copying those lent to me. And, resolved to make another herbarium richer than the first, while waiting to put all the plants of the sea and the Alps and

all the trees of the Indies in it, I begin, at least quite economically, with bird's-eye, chervil, borage, and common groundsel. I learnedly look for plants in my birdcage and with each new blade of grass I encounter, I say to myself with satisfaction: here is yet another plant.

I do not seek to justify the course I take in following this fancy. I find it very reasonable, persuaded that in my present position it is great wisdom and even great virtue to give myself up to pastimes which gratify me. It is the means of not letting any germ of revenge or hatred spring up in my heart; and, given my destiny, to still find delight in any amusement, it is surely necessary to have a natural temperament quite purified of all irascible passions. I thus avenge myself of my persecutors in my way: I would not know how to punish them more cruelly than to be happy in spite of them.

Yes, without a doubt, reason permits me, even commands me, to give myself up to every propensity which attracts me and which nothing prevents me from following. But it does not teach me why this propensity attracts me and what attraction I can find in a vain study done without profit, without progress, and which leads me—a doddering old man, who is already decrepit and sluggish and without aptitude or memory—back to the exertions of youth and the lessons of a schoolboy. Now this is a bizarre thing I would like to explain to myself. It seems to me that if it were thoroughly explained, it could throw some new light on this knowledge of myself I have consecrated my last moments of leisure to acquiring.

I have sometimes thought rather deeply, but rarely with pleasure, almost always against my liking, and as though by force. Reverie relaxes and amuses me; reflection tires and saddens me; thinking always was a painful and charmless occupation for me. Sometimes my reveries end in meditation, but more often my meditations end in reverie; and during these wanderings, my soul rambles and glides through the universe on the wings of imagination, in ecstasies which surpass every other enjoyment.

As long as I savored that enjoyment in all of its purity, every other preoccupation was always insipid to me. But when, once thrown into a literary career by foreign impulsions, I felt the fatigue of mental work and the importunity of an ill-fated renown, at the same time I felt my sweet reveries languish and cool. And soon forced, despite myself, to concern myself with my sad situation, only very rarely could I recapture those dear ecstasies which for fifty years had taken the place of fortune and glory and, without any other expense than that of time, had made me, in idleness, the happiest of mortals.[3]

In my reveries I even had to fear lest my imagination, frightened by my misfortunes, might finally turn its activity to this side and lest the continual sentiment of my troubles, gradually constricting my heart, crush me at

last with its weight. In this condition an instinct which is natural to me, making me flee every depressing idea, imposed silence upon my imagination and, fixing my attention upon the objects which surrounded me, made me consider in detail for the first time the spectacle of nature which until then I had hardly contemplated except in a mass and in its wholeness.

Trees, shrubs, and plants are the attire and clothing of the earth. Nothing is so sad as the sight of a plain and bare countryside which displays only stones, clay, and sand to the eyes. But enlivened by nature and arrayed in its nuptial dress amidst brooks and the song of birds, the earth, in the harmony of the three realms, offers man a spectacle filled with life, interest, and charm—the only spectacle in the world of which his eyes and his heart never weary.

The more sensitive a soul a contemplator has, the more he gives himself up to the ecstasies this harmony arouses in him. A sweet and deep reverie takes possession of his senses then, and through a delightful intoxication he loses himself in the immensity of this beautiful system with which he feels himself one. Then, all particular objects elude him; he sees and feels nothing except in the whole. Some particular circumstance must focus his ideas and close off his imagination for him to be able to observe the parts of this universe he was straining to embrace.

This is what naturally happened to me when my heart, constricted by distress, brought together and centered all its impulses around itself to preserve the remainder of warmth that was about to evaporate and be extinguished by the despondency into which I was gradually falling. I would wander at random through the woods and mountains, not daring to think for fear of stirring up my sufferings. My imagination, which rejects sorrowful objects, let my senses give themselves up to the light but sweet impressions of surrounding objects. My eyes incessantly strayed from one object to another, and in such a great variety it was impossible not to find something which would captivate them more and hold them for a longer time.

I delighted in this ocular recreation which in misfortune relaxes, amuses, distracts the mind, and suspends the troubled feeling. The nature of the objects greatly aids in this diversion and makes it more seductive. Fragrant odors, intense colors, the most elegant shapes seem to vie with each other for the right of capturing our attention. To give oneself up to such delicious sensations, it is necessary only to love pleasure. And if this effect does not occur for all those who are struck by these objects, with some it is due to a lack of natural sensitivity and with most it is because their mind, too preoccupied with other ideas, only furtively gives itself up to the objects which strike their senses.

Yet another thing contributes to turning refined people's attention away from the vegetable realm: the habit of seeking only drugs and remedies in plants. Theophrastus[4] had gone about it otherwise, and we can regard this philosopher as the only botanist of antiquity; therefore, he is almost unknown among us. But thanks to a certain Dioscorides[5]—a great compiler of recipes—and to his commentators, medicine has taken possession of plants and transformed them into simples to such an extent that we see in them only what we do not see in them at all, to wit, the pretended virtues it pleases just anybody to attribute to them. We do not imagine that plant structure might merit any attention in itself. People who spend their life learnedly arranging shells ridicule botany as a useless study when we do not, as they say, combine it with the study of properties; that is to say, when we do not forsake the observation of nature, which does not lie at all and which says nothing of all that to us, to yield to the sole authority of men, who are liars and who assert many things we must necessarily believe upon their word, itself most often founded on the authority of others. Stop in a multicolored meadow to examine, one after the other, the flowers which make it gleam. Those who see you doing this, taking you for a barber-surgeon's assistant, will ask you for herbs to cure children's itches, men's scabies,[6] or horses' glanders. This disgusting prejudice has been partly destroyed in other countries, especially in England, thanks to Linnaeus who has somewhat taken botany out of pharmacology schools and brought it back to natural history and economic uses. But in France, where this study has penetrated less among the worldly people, they have remained so barbarous on this point that a fine wit from Paris, seeing in London a connoisseur's garden full of rare trees and plants, cried out as his sole praise: "That is a very fine Apothecary's garden." By this account, the first Apothecary was Adam, for it is not easy to imagine a garden better stocked with plants than the Garden of Eden.

These medicinal ideas are assuredly not very suitable for making the study of botany pleasurable. They wither the diversity of colors in the meadows and the splendor of the flowers, dry up the freshness of the groves, and make greenery and shady spots insipid and disgusting. All these charming and gracious structures barely interest anyone who only wants to grind it all up in a mortar, and no one will go seeking garlands for shepherd lasses amidst purgative herbs.

All this pharmacology did not sully my pastoral images; nothing was further removed from them than infusions and poultices. While looking closely at fields, orchards, woods, and their numerous inhabitants, I have often thought that the vegetable realm was a storehouse of foods given to man and animals by nature. But it never crossed my mind to seek drugs

and remedies there. I see nothing in her various products which indicates such a use to me, and had she prescribed this to us she would have shown us how to select them as she has done with victuals. I even feel that the pleasure I take in wandering through groves would be poisoned by the sentiment of human infirmities, if I were led to think about fever, stones, gout, or epilepsy. For the rest, I will not dispute the great virtues attributed to plants. I will only say that in supposing those virtues to be real, it is pure malice for the sick to continue to be so. For of the many sicknesses men give each other, there is not a single one which twenty different herbs do not completely cure.

This turn of mind, which always brings everything back to our material interest, which causes us to seek profit or remedies everywhere, and which would cause us to regard all of nature with indifference if we were always well, has never been mine. With respect to that, I feel just the opposite of other men: everything which pertains to feeling my needs saddens and spoils my thoughts, and I have never found true charm in the pleasures of my mind except when concern for my body was completely lost from sight. Thus, even if I were to believe in medicine and even if its remedies were pleasant, in concerning myself with them I would never find those delights which arise from pure and disinterested contemplation; and my soul could not rise up and glide through nature as long as I felt it holding to the bonds of my body. Besides, without ever having had great trust in medicine, I have had a great deal in doctors whom I esteemed, whom I loved, and whom I allowed to govern my carcass with full authority. Fifteen years of experience have instructed me at my own expense; back now under the sole laws of nature, I have regained my original health through them. Were doctors to have no other grievances against me, who could be surprised at their hatred? I am the living proof of the futility of their art and the uselessness of their ministrations.

No, nothing personal, nothing which concerns my body can truly occupy my soul. I never meditate, I never dream more delightfully than when I forget myself. I feel ecstasies and inexpressible raptures in blending, so to speak, into the system of beings and in making myself one with the whole of nature. As long as men were my brothers, I made plans of earthly felicity for myself. These plans always being relative to the whole, I could be happy only through public felicity; and the idea of private happiness never touched my heart until I saw my brothers seeking theirs only in my misery. Then it became necessary to flee them so as not to hate them. Then, seeking refuge in mother nature,[7] I sought in her arms to shield myself against the attacks of her children. I have become solitary or, as they say, unsociable and misanthropic, because to me the most desolate soli-

tude seems preferable to the society of wicked men which is nourished only by betrayals and hatred.

Forced to abstain from thinking for fear of thinking about my misfortunes in spite of myself, forced to keep in check the remainders of a cheerful but languishing imagination which so much anguish could end up by frightening, forced to try to forget the men who overwhelm me with ignominy and insults for fear that indignation might finally embitter me against them, I am nevertheless unable to become entirely wrapped up in my own self, because in spite of my efforts, my expansive soul seeks to extend its feelings and existence to other beings. And I can no longer, as before, throw myself headfirst into this vast ocean of nature, because my weakened and slackened faculties no longer find objects sufficiently defined, sufficiently settled, sufficiently within my reach to which they can strongly attach themselves, and because I no longer feel myself vigorous enough to swim in the chaos of my former ecstasies. My ideas are now almost nothing but sensations, and the sphere of my understanding does not transcend the objects which immediately surround me.

Fleeing men, seeking solitude, no longer imagining, thinking even less, but gifted nonetheless with a lively temperament which saves me from listless and melancholy apathy, I began to busy myself with everything which surrounded me and by a quite natural instinct I preferred the most pleasant objects. In itself, the mineral realm has nothing lovely or attractive. Its riches, sealed up within the bosom of the earth, seem to have been removed from the sight of man so as not to tempt his cupidity. They are there, as though in reserve, to serve one day as a supplement to the genuine riches more within his reach and for which he loses taste to the extent that he becomes corrupted. Thus he must call on industry, labor, and toil to relieve his misery. He digs in the bowels of the earth. He goes to its center, at the risk of his life and the expense of his health, to seek imaginary goods in place of the real goods it freely offered him when he knew how to enjoy them. He flees the sun and the day which he is no longer worthy to see. He buries himself alive and does well, no longer deserving to live in the light of day. There, quarries, pits, forges, furnaces, an apparatus of anvils, hammers, smoke, and fire replace the gentle images of pastoral occupations. The wan faces of the wretches who languish in the foul fumes of the mines, of grimy ironsmiths, of hideous cyclopes are the spectacle the apparatus of the mines substitutes, in the bosom of the earth, for that of greenery and flowers, of azure sky, of amorous shepherds, and of robust plowmen on its surface.

It is easy, I confess, to go about picking up sand and stones with which to fill our pockets and our study, thereby affecting to be a naturalist. But

those who devote and limit themselves to these sorts of collections are, ordinarily, wealthy ignoramuses who seek in them only the pleasure of ostentation. To make progress in the study of minerals, it is necessary to be a chemist and a physicist. It is necessary to perform tedious and costly experiments, to work in laboratories, to spend much money and time in the midst of charcoal, crucibles, furnaces, retorts, smoke, and suffocating fumes, always at the risk of life and often at the expense of health. From all this sad and tiresome toil much less knowledge than pride ordinarily results, and where is the most mediocre chemist who does not think he has penetrated all the great operations of nature because he has discovered, perhaps by chance, a few small tricks of the art?

The animal realm is more within our reach and is certainly even more deserving of being studied. But, after all, does this study not also have its difficulties, its encumbrances, its distasteful elements, and its labors, especially for a solitary person who can hope for no assistance from anyone either in his play or in his toils? How am I to observe, dissect, study, become acquainted with the birds in the air, the fish in the water, or the quadrupeds swifter than the wind and stronger than man, which are no more disposed to come offer themselves to my research than I to run after them to make them submit to it by force? Thus I would have snails, worms, and flies as a resource;[8] and I would spend my life gasping for breath as I chase after butterflies, impale poor insects, dissect mice when I could catch any, or the carrion of the beasts I might by chance find dead. The study of animals is nothing without anatomy. By it one learns to classify them, to distinguish the genera and the species. To study them according to their habits[9] and characteristics, it would be necessary to have aviaries, fishponds, cages; it would be necessary to force them, as best I could, to remain gathered together around me. I have neither the desire nor the means to hold them in captivity, nor the necessary agility to chase after them when they are at liberty. It will be necessary, then, to study them dead, to tear them apart, to bone them, to poke at leisure into their palpitating entrails! What a frightful apparatus is an anatomical amphitheater: stinking corpses, slavering and livid flesh, blood, disgusting intestines, dreadful skeletons, pestilential fumes! Upon my word, that is not where Jean-Jacques[10] will go looking for his fun.

Brilliant flowers, diverse colors of the meadows, fresh shady spots, brooks, thickets, greenery, come purify my imagination sullied by all those hideous objects. My soul, dead to all great impulses, can no longer be affected by anything but perceptible objects. I no longer have anything but sensations, and now it is only by them that pain or pleasure can reach me here-below. Attracted by the cheerful objects which surround me, I

consider them, contemplate them, compare them, and eventually learn to classify them; and now I am all of a sudden as much a botanist as is necessary for someone who wants to study nature only to find continuous new reasons to love it.

In no way do I seek to instruct myself: it is too late. Besides, I have never seen that such knowledge contributes to life's happiness. But I seek to give myself sweet and simple pastimes which I can savor without labor and which distract me from my misfortunes. It costs me neither expense nor trouble to wander at random from herb to herb and from plant to plant to examine them, to compare their diverse characters, to take note of their similarities and differences, in sum, to observe the way plants are composed so as to follow the course and the operation of these living machines, to seek—sometimes with success—their general laws as well as the reason for and the end of their diverse structures, and to give myself up to the charm of grateful admiration for the hand which lets me enjoy all of that.

Plants seem to have been sown profusely on the earth, like the stars in the sky, to invite man to the study of nature by the attraction of pleasure and curiosity. But the heavenly bodies are set far away from us. Preliminary knowledge, instruments, machines, and very long ladders are needed to get to them and bring them within our reach. Plants are naturally within our reach. They are born under our feet and in our hands, so to speak; and if the smallness of their essential parts sometimes conceals them from plain view, the instruments which reveal them are much easier to use than those of astronomy. Botany is a study for an idle and lazy solitary person: a point and a magnifying glass are all the apparatus he needs to observe plants. He walks about, wanders freely from one object to another, examines each flower with interest and curiosity, and as soon as he begins to grasp the laws of their structure, he enjoys, in observing them, a painless pleasure as intense as if it had cost him much pain. In this idle occupation there is a charm we feel only in the complete calm of the passions, but which then alone suffices to make life happy and sweet. But as soon as we mingle a motive of interest or vanity with it, either in order to obtain a position or to write books, as soon as we want to learn only in order to instruct, as soon as we look for flowers only in order to become an author or professor, all this sweet charm vanishes. We no longer see in plants anything but the instruments of our passions. We no longer find any genuine pleasure in their study. We no longer want to know, but to show that we know. And in the woods, we are only on the world's stage, preoccupied with making ourselves admired. Or else, restricting ourselves to armchair and garden botany at the most, instead of observing vegetation in nature,

we concern ourselves only with systems and methods—an eternal matter of dispute which does not lead to an additional plant being known and throws no true light on natural history and the vegetable realm. That is the source of the hatreds and the jealousies that rivalry for fame excites among botanical authors as much as, and more than, among other learned men. Altering the nature of this lovely study, they transplant it to the middle of cities and academies where it withers no less than exotic plants in the gardens of connoisseurs.

Quite different dispositions have made this study a kind of passion for me which fills the void left by all those I no longer have. I clamber up rocks and mountains, I go deep into vales and woods in order to slip away, as much as possible, from the memory of men and from the attacks of the wicked. It seems to me that in the shade of a forest I am as forgotten, free, and peaceful as though I had no more enemies or that the foliage of the woods must keep me from their attacks just as it removes them from my memory; and in my foolishness I imagine that by not thinking about them, they will not think about me. I find so great a sweetness in this illusion that I would give myself up to it entirely if my situation, my weakness, and my needs permitted it. The more profound the solitude in which I then live, the more necessary it is that some object fill the void; and those my imagination denies me or my memory pushes away are replaced by the spontaneous products that the earth, not violated by men, offers my eyes on all sides. The pleasure of going into an uninhabited area to seek new plants blots out the pleasure of escaping from my persecutors, and having arrived in places where I see no trace of men, I breathe more at my ease, as though I were in a refuge where their hatred no longer pursues me.

All my life I will remember a plant excursion I made one day near the Robaila, a mountain farm belonging to Justiciary Clerc.[11] I was alone; I went deep into the winding crevices of the mountain; and passing from wood to wood and boulder to boulder, I arrived at a retreat so hidden that I have never seen a more desolate sight in my life. Black pines were interspersed with prodigious beeches, several of which had fallen from old age and become interlaced with each other, thereby closing off this retreat with impenetrable barriers. The few openings left from this somber enclosure gave on to nothing but perpendicularly cut boulders and horrible precipices, which I dared to look over only by lying down on my stomach. The Eagle Owl, the sparrow hawk, and the osprey made their cries heard in the chasms of the mountain. However, some small birds, rare but known to me, tempered the dreadfulness of this solitude. There I found the *Dentaria heptaphyllos*,[12] the *Cyclamen*,[13] the *Nidus avis*,[14] the big *Laserpitium*,[15] and some other plants which charmed and absorbed me for a

long time. But imperceptibly dominated by the strong impression of the surrounding objects, I forgot botany and plants. I sat down on a cushion of *Lycopodium*[16] and mosses and began to dream more at ease thinking that I was in a refuge unknown to the whole universe where persecutors would not unearth me. A flash of pride soon inserted itself into this reverie. I compared myself to those great travelers who discover an uninhabited Island, and I said to myself with self-satisfaction: "Without a doubt, I am the first mortal to have penetrated thus far." I saw myself almost as another Columbus. While I preened myself with this idea, I heard, not far from me, a certain clanking I thought I recognized; I listened—the same noise was repeated and increased. Surprised and curious, I got up, burst through a thicket of brush on the side from which the noise was coming, and, in a little hollow twenty feet from the very place where I believed myself to have been the first to arrive, I saw a stocking mill.

I cannot express the confused and contradictory agitation I felt in my heart at this discovery. My first impulse was a feeling of joy to find myself back among humans when I had believed myself totally alone. But this impulse, occurring faster than lightning, soon gave way to a painful and more lasting feeling of being unable, even in the deepest recesses of the Alps, to escape from the cruel hands of men eager to torment me. For I was quite sure that there were perhaps not two men in this factory who were not initiates in the plot of which Pastor Montmollin[17] had made himself the leader and whose mainsprings he regulated from afar. I hastened to drive away this depressing idea and ended up laughing to myself about both my puerile vanity and the comic manner in which I had been punished for it.

But, after all, who would ever have expected to find a mill in a ravine? In the whole world, only Switzerland presents this mixture of wild nature and human industry. The whole of Switzerland is, so to speak, only a large city whose streets, wider and longer than the Rue St. Antoine,[18] are sown with forests, cut by mountains, and whose sparse and isolated houses have only English gardens as a link between them. With reference to this, I recalled another plant excursion that Du Peyrou,[19] d'Escherny,[20] Colonel de Pury,[21] Justiciary Clerc, and I had made some time ago on Mount Chasseron, from whose summit seven lakes can be seen.[22] We were told that there was only a single house on this mountain and we would surely not have guessed the profession of the person who inhabited it, had it not been added that he was a bookseller and one who even did a very good business in the region.[23] It seems to me that a single fact of this kind makes Switzerland better understood than all the descriptions of travelers.

Another of the same nature, or very nearly so, serves no less to make a

quite different people understood. During my sojourn in Grenoble,[24] I frequently made little plant excursions outside the city with Squire Bovier,[25] a lawyer of that region—not that he loved or knew botany, but having made himself my personal bodyguard, he made it a law unto himself not to be a step away from me, if at all possible. One day we were walking along the Isère in a spot completely full of thorny willows. I saw some ripe fruit on these shrubs; I was interested in tasting a few and, finding a bit of acidity in them that was very pleasant, I began to eat some of these berries to refresh myself. Squire Bovier stood alongside of me without imitating me and without saying anything. One of his friends came up and, seeing me pecking at these berries, said to me: "Hey, Sir! What are you doing there? Don't you know this fruit is poisonous?" "This fruit is poisonous?" I cried out, completely surprised. "Without a doubt," he replied, and everyone knows it so well that nobody in the region would think of eating them." I looked at Squire Bovier and said to him: "Why, then, didn't you warn me?" "Ah, sir," he replied to me in a respectful tone, "I didn't dare take that liberty." I began to laugh at this Dauphinois humility, but nonetheless put an end to my little snack. I was persuaded, as I still am, that any pleasant-tasting natural product cannot be harmful to the body, or is so, at least, only through excess. However, I confess that I watched myself a little for the remainder of the day, but I got off with no more than a little worry; I supped very well, slept better, and got up the next morning in perfect health, after having the day before swallowed fifteen or twenty berries of this terrible *hippophae*,[26] of which, according to what everyone told me in Grenoble the following day, even the smallest dose is poisonous. This adventure struck me as so funny that I never recall it without laughing at the unusual discretion of the lawyer, M. Bovier.

All of my botanical jaunts, the diverse impressions of the place in which the objects which struck me were located, the ideas that place brought forth in me, the incidents which were mingled with it, all of that has left me with impressions which are renewed by seeing the plants I had looked for in those very places. I will never again see those beautiful landscapes, forests, lakes, groves, masses of rocks, or mountains whose sight has always touched my heart; but now that I can no longer roam about those happy regions, I have only to open my herbarium, and it soon transports me there. The fragments of the plants I collected there suffice to remind me of that whole magnificent spectacle. This herbarium is for me a diary of plant excursions which permits me to begin them again with a renewed pleasure and produces the effect of an opticon[27] which paints them anew before my eyes.

I am attached to botany by the chain of accessory ideas. Botany gathers

together and recalls to my imagination all the ideas which gratify it more. The meadows, the waters, the woods, the solitude, above all, the peace and rest to be found in the midst of all that are incessantly retraced in my memory by my imagination. Botany makes me forget men's persecutions, their hatred, scorn, insults, and all the evils with which they have repaid my tender and sincere attachment for them. It transports me to peaceful habitats among simple and good people, such as those with whom I formerly lived. It recalls to me both my youth and my innocent pleasures; it makes me enjoy them anew and, quite often, still makes me happy in the midst of the saddest lot a mortal has ever undergone.

Eighth Walk

In meditating upon the dispositions of my soul during all the situations of my life, I am quite struck to see so little proportion between the different phases of my fate and the habitual feelings of well-being or uneasiness by which they affected me. My various, brief intervals of prosperity have left me almost no pleasant memory of the intimate and permanent manner in which they affected me. Conversely, during all the miserable moments of my life, I constantly felt myself filled with tender, touching, delightful sentiments which, pouring a salutary balm over the wounds of my broken heart, seemed to transform its suffering into pleasure. And separated from the memory of the evils I felt at the same time, only the gentle memory of those sentiments comes back to me. It seems to me that I have savored the sweetness of existence more, that I have really lived more, when my sentiments—drawn back around my heart, so to speak, by my fate—were not being wasted on all the objects of men's esteem which are of so little merit in themselves, but which are the sole concern of the people we believe to be happy.

When all was in order around me, when I was content with all that surrounded me and with the sphere in which I was to live, I filled it with my affectionate feelings. My expansive soul extended itself to other objects and, continually drawn outside myself by a thousand different kinds of fancies, by gentle attachments which continually busied my heart, I somehow forgot even myself.[1] I was entirely devoted to what was alien to me; and in the continual agitation of my heart, I experienced all the vicissitudes of human things. This stormy life left me neither peace within nor rest without. Happy in appearance, I had not one sentiment which could withstand the test of reflection and truly please me. I was never perfectly satisfied with others or myself. The tumult of the world made my head swim; solitude bored me; I needed to move around constantly; and I was comfortable nowhere. I was, however, entertained, welcomed, well received, and treated with affection everywhere. I had not one enemy, no one ill-disposed toward me, no one envious of me. Since people sought only to do me favors, I often had the pleasure of doing favors for many people myself. And, without wealth, without employment, without a protector,[2] without great talents that were either well developed or well

known, I enjoyed the advantages which went along with all that. And I saw nobody in any station whose lot appeared preferable to mine. What was I lacking, then, to be happy? I don't know, but I do know that I was not happy.

What am I lacking today to be the most unfortunate of mortals? Nothing of anything men have been able to do to make me so. And yet in this deplorable condition, I still would not change being or destiny with the most fortunate among them, and I still prefer to be myself in all my misery than to be any of those people in all their prosperity. Left only to myself, I feed, it is true, on my own substance; but it is not depleted. And I am sufficient unto myself, even though I ruminate on an empty stomach, so to speak, and though my withered imagination and my burned-out ideas furnish no more nourishment for my heart. My soul—clouded and obstructed by my organs—sinks down day by day and, [beneath the] weight of these heavy masses, no longer has enough vigor to thrust itself out of its old wrapping as it used to do.[3]

Adversity forces us to this turning in on ourselves; and that is perhaps what renders it most unbearable for the greater part of men. As for me, who finds only faults for which to reproach myself, I blame them on my weakness and console myself, for premeditated evil never approached my heart.

However, unless I am stupid, how can I contemplate my situation for a moment without seeing that it is as horrible as they have made it and without perishing from sorrow and despair? Far from that, I, the most sensitive of beings, contemplate it and am not disturbed by it; and without struggling or exerting myself, I see myself almost with indifference in a condition whose sight perhaps no other man could bear without horror.

How have I come to that? For I was quite far from this peaceful disposition when I first suspected the conspiracy in which I had long been entangled without having noticed it at all. This new discovery overwhelmed me. Infamy and betrayal caught me unawares. What honest soul is prepared for such suffering? It would be necessary that one deserve it in order to foresee it. I fell into all the snares they placed along my path; indignation, fury, delirium, took possession of me. I was completely disoriented. My mind was overwhelmed. And in the horrible darkness in which they did not cease to keep me immersed, I no longer perceived a glimmer of light to guide me or a support or stay to steady myself by and resist the despair which carried me away.

How could I live happily and serenely in this dreadful condition? I am, however, still in it and deeper so than ever. In it, I have again found calm and peace. In it, I live happily and serenely. In it, I laugh at the incredible

torments my persecutors constantly give themselves in vain,[4] while I remain at peace, busied with flowers, stamens, and childish things and do not even think of them.

How was this transition made? Naturally, imperceptibly, and without toil. The first surprise was frightful. I, who felt myself worthy of love and esteem; I, who believed myself honored, cherished, as I deserved to be; I saw myself suddenly misrepresented as a dreadful monster the likes of which has never existed. I saw a whole generation rush headlong into this strange opinion, without explanation, without doubt, without shame, and without my ever being able at the very least to get to know the cause of this strange revolution. I struggled violently and only entangled myself more. I wanted to force my persecutors to explain themselves to me; they took care not to. After having unsuccessfully tormented myself for a long time, it was quite necessary to catch my breath. However, I always hoped. I said to myself: so stupid a blindness, so absurd a prepossession, will never be able to win over the whole human race. There are sensible men who do not share this delirium; there are just souls who detest knavery and traitors. Let me seek, I will perhaps eventually find a man; if I find him, they are confounded. I sought in vain; I have not found him. The league is universal, without exception, past all hope; and I am sure I will finish my days in this dreadful rejection without ever penetrating the mystery of it.

It is in this deplorable condition that, after lengthy anguish, instead of the despair which seemed bound to be my share in the end, I again found serenity, tranquility, peace, even happiness, since each day of my life reminds me with pleasure of the previous day and since I desire no other for the morrow.

What gives rise to this difference? A single thing: I have learned to bear the yoke of necessity without murmur. I was still forcing myself to[5] hold on to a thousand things, but now that they have all slipped away from me one after the other and I am left only to myself, I have finally regained my composure. Pressed on all sides, I dwell in equilibrium because, no longer attached to anything else, I depend only on myself.

When I rose up against opinion with so much ardor, I was still bearing its yoke without having noticed it. We want to be esteemed by the people we esteem; and as long as I could judge men, or at least some men, favorably, the judgments they held about me could not be uninteresting to me. I saw that the judgments of the public are often equitable. But I did not see that this very equity was the effect of chance, that the rules on which they base their opinions are drawn only from their passions or their prejudices, which are the work of their passions, and that even when they judge well, these good judgments still frequently arise from a bad principle—as

when they feign to honor a man's merit because of some success,[6] not from a spirit of justice, but to seem impartial, while slandering the same man on other points with no qualms whatever.

But after long and vain research, I still saw them all, without exception, participating in the most iniquitous and absurd system an infernal mind could invent. I saw that with respect to me reason was banished from every head and equity from every heart. I saw a frenetic generation completely cede to the blind fury of its leaders against an unfortunate man who never did, willed, or rendered evil to anybody. After having sought ten years for a man in vain, I finally had to extinguish my lantern and cry out: "There are no more!" Then I began to see myself alone on earth and I understood that in relation to me my contemporaries were nothing more than automatons who acted only on impulse and whose action I could calculate only from the laws of motion.[7] Whatever intention, whatever passion, I might have supposed in their souls would never have explained their conduct with respect to me in a way I could have understood. Thus their interior dispositions ceased to be of any importance to me. I no longer saw in them anything but randomly moved masses, destitute of all morality with respect to me.

In all the evils which befall us, we look more to the intention than to the effect. A shingle falling off a roof can injure us more, but does not grieve us as much as a stone thrown on purpose by a malevolent hand. The blow sometimes goes astray, but the intention never misses its mark. Material suffering is what we feel least in the blows of fortune; and when the unfortunate do not know whom to blame for their misfortunes, they blame fate which they personify and to which they ascribe eyes and an intelligence to torment them intentionally. Thus it is that a gambler, vexed by his losses, becomes furious at he knows not whom. He imagines a fate which relentlessly and intentionally torments him and, finding fuel for his anger, he becomes irritated and inflamed against the enemy he has created for himself. The wise man, who sees only the blows of blind necessity in all the misfortunes which befall him, does not have this insane agitation. He cries out in his suffering, but without being carried away, without anger. He feels only the material blow of the evil to which he is prey, and the beatings he receives[8] injure his body in vain—not one reaches his heart.

It is a lot to have reached this point, but it is not all. If we stop here, we have indeed cut out the evil, but we have left the root. For this root is not in the beings who are alien to us, but in ourselves; and that is where we must exert ourselves to extract it completely. That is what I felt perfectly from the moment I began to turn back to myself. My reason showing me only absurdities in all the explanations I sought to give to what befalls me,

I understood that the causes, the instruments, and the means of all that, unknown and inexplicable to me, ought not to matter to me. I understood that I ought to regard all the details of my fate as so many acts of pure fatality to which I ought not ascribe direction, intention, or moral cause. I understood that I had to submit to it without reasoning and without struggling, because that would be useless. I understood that since all I had yet to do on earth was to regard myself on it as a purely passive being, I ought not to use up, in futilely resisting my fate, the strength I had left to endure it. That is what I told myself; my reason and my heart acquiesced in it; and yet I still felt this heart of mine grumble. What gave rise to this grumbling? I sought for it and found it: it came from amour-propre which, after having become indignant about men, also rebelled against reason.

This discovery was not as easy to make as one might believe, for an innocent persecuted man considers his petty self-pride as pure love of justice for a long time. Still, once the genuine source is known, it can easily be dried up or at least diverted. Self-esteem is the greatest motive force of proud souls. Amour-propre, fertile in illusions, disguises itself and passes itself off as this esteem. But when the fraud is finally discovered and amour-propre can no longer hide itself, from then on it is no more to be feared; and even though we stifle it with difficulty, we at least easily overcome it.

I never had much of a bent for amour-propre, but this factitious passion had become magnified in me when I was in the social world, especially when I was an author. I had perhaps even less of it than others, but I had it prodigiously. The terrible lessons I received soon confined it to its former limits. It began by revolting against injustice, but finished by disdaining it. By withdrawing into my soul and severing the external relations which make it demanding, by renouncing comparisons and preferences, it was satisfied with my being good in my own eyes. Then, again becoming love of myself, it returned to the natural order and delivered me from the yoke of opinion.

From that moment, I again found peace of soul and almost felicity. In whatever situation we find ourselves, it is only because of amour-propre that we are constantly unhappy. When it is quiet and reason speaks, reason eventually consoles us for all the evils we have not been able to avoid. Reason annihilates them insofar as they do not immediately affect us; for by ceasing to be preoccupied with them, we are sure of avoiding their most poignant blows. They are nothing for the person who does not think about them. Offenses, acts of revenge, slights, insults, injustices are nothing for the person who, in the evils he endures, sees only the evil itself and

not any intention, for the person whose rank in his own esteem does not depend on the one others are willing to accord him. However men may wish to view me, they cannot change my being; and, regardless of their power and all their underhanded intrigues, I will continue to be what I am, whatever they might do and in spite of them. It is true that the way they are disposed to me influences my actual situation; the barrier they have placed between them and me deprives me of every source of subsistence and assistance in my old age and time of need. This barrier even makes money useless to me, because it cannot procure me the necessary services. There is no longer mutual exchange and assistance, no longer any correspondence between them and me. Alone in the midst of them, I have only myself as a source, and this source is very feeble at my age, and in my present condition. These evils are great, but they have lost all their force for me since I have learned how to bear them without becoming irritated. The times in which true need makes itself felt are always rare. Foresight and imagination increase them, and as these feelings continue we worry and make ourselves unhappy. As for me, it matters little that I know I will suffer tomorrow; to be at peace, it is sufficient that I not suffer today. I am not affected by the evil I foresee, but only by the one I feel and that limits it considerably. Alone, sick, and forsaken in my bed, I can [suffer][9] there from indigence, cold, and hunger without anybody caring. But what does it matter, if not even I care and if I become as little affected as the others about my destiny, whatever it may be? Is it nothing, especially at my age, to have learned to view life and death, sickness and health, wealth and misery, glory and infamy with the same indifference? All other old men are worried about everything; I am worried about nothing. Whatever may happen, I am completely indifferent to it; and this indifference is not the work of my wisdom; it is that of my enemies. Let me learn, therefore, to accept these advantages as compensation for the evils they do to me. In making me insensitive to adversity, they have done me more good than if they had spared me its blows. In not experiencing it, I might have always feared it; instead, by overcoming it, I no longer fear it.

In the midst of the things that hinder my life, this disposition delivers me up to the carefreeness of my natural disposition almost as fully as if I were living in the most complete prosperity. Apart from the brief moments when I am recalled to the most distressing worries by the presence of objects,[10] all the rest of the time, given up by my inclinations to the affections which attract me, my heart is still nourished by the sentiments for which it was born and I enjoy them with the imaginary beings who produce and share them, as though these beings really existed. They exist for me who has created them, and I am not afraid they will betray or aban-

don me. They will last as long as my misfortunes themselves and will suffice to make me forget them.

Everything brings me back to the happy and sweet life for which I was born. I pass three-fourths of my life occupied with instructive and even agreeable objects in which I indulge my mind and my senses with delight, or with the children of my fancy whom I have created according to my heart and whose company sustains its sentiments, or with myself alone, satisfied with myself and already full of the happiness I feel to be due me. In all this, love of myself does all the work; amour-propre has nothing to do with it. This is not the case during the sorrowful moments I still pass in the midst of men—a plaything of their treacherous flattery, bombastic and derisive compliments, and honeyed malignity. No matter what I might try to do, amour-propre then comes into play. The hatred and animosity I discern through the coarse wrapping of their hearts tear my own heart apart with sorrow; and the idea of being taken for a dupe in this foolish way adds a very childish spite to this sorrow—the result of a foolish amour-propre whose complete folly I sense, but which I cannot overcome. The efforts I have made to become inured to these rude and mocking looks are unbelievable. A hundred times I have passed along the public walks and through the most frequented spots with the sole intention of inuring myself to those cruel taunts.[11] Not only have I not been able to succeed, I have not made any progress; and all my painful, but vain, efforts have left me as easy to disturb, to grieve, and to render indignant as before.

Dominated by my senses whatever I may do, I have never been able to resist their impulses; and as long as an object acts upon them, my heart does not fail to be affected. But these passing affections last only as long as the sensation which causes them. The presence of a hateful man violently affects me. But as soon as he disappears, the impression ceases. The instant I no longer see him, I no longer think about him. It matters little that I know he is going to pay attention to me; I cannot pay any attention to him. The evil I do not feel at this moment affects me in no way; the persecutor I do not see is nothing for me. I am aware of the advantage this position gives to those who dispense my fate. Let them dispense it, then, with no qualms whatever. I still prefer to have them torment me without resisting than to have to think about them so as to protect myself from their attacks.

The way my senses thus work upon my heart constitutes the sole torment of my life. The days I see no one I no longer think about my fate, I no longer feel it, I no longer suffer; I am happy and satisfied without distraction, without obstacle. But I can rarely escape any perceptible slight; and when I am least thinking about it, a gesture,[12] a sinister look I per-

ceive, a venomous word I hear, an ill-disposed person I meet, is enough to overwhelm me. All I am capable of in such a case is very quickly forgetting and fleeing. The disturbance in my heart disappears with the object which has caused it, and I return to calm as soon as I am alone. Or if something does worry me, it is the fear of encountering some new cause of sorrow along my way. That is my only torment, but it suffices to alter my happiness. I reside in the middle of Paris. When I leave my home, I long for the countryside and solitude. But it is necessary to go so far to seek it that before I can breathe easily, I find a thousand objects along my path which constrict my heart, and half the day is passed in anguish before I have reached the refuge I am seeking. At least I am happy when they let me reach my destination. The moment I slip away from the retinue of the wicked is delightful; and as soon as I find myself under the trees and in the midst of greenery, I believe I am in the earthly paradise and I savor an inner pleasure as intense as if I were the happiest of mortals.

I remember perfectly that during my brief moment of prosperity these same solitary walks which are so delightful for me today were insipid and boring. When I was at someone's house in the country, the need to get some exercise and to breathe fresh air often made me go out alone; and sneaking away like a thief, I would go walk about the park or the countryside. But far from finding the happy calm I savor there today, I took along the disturbance of the vain ideas which had preoccupied me in the drawing room. Memory of the company I had left followed me into solitude. The fumes of amour-propre and the tumult of the world made the freshness of the groves seem dull and troubled the peace of the retreat. I fled deep into the woods in vain; an importunate crowd followed me everywhere and veiled all of nature to me. It is only after having detached myself from social passions and their sad retinue that I have again found nature with all its charms.

Convinced of the impossibility of containing these first involuntary motions, I gave up all my efforts to do so. Now, at each blow I let my blood boil. I let anger and indignation take possession of my senses. I yield this first explosion, that all my strength could neither stop nor delay, to nature. I try only to stop its consequences before it produces any effect. Flashing eyes, an inflamed face, trembling limbs, a throbbing heart—that is all purely physical, and reasoning can do nothing about it. But after having let our natural temperament have its first explosion, we can become our own master again as we regain our senses bit by bit. That is what I unsuccessfully tried to do for a long time, but with more luck at last. And ceasing to use up my strength by vainly resisting, I wait for the moment when I can conquer by letting my reason act; for it speaks to me only when

it can make itself heard. Alas! What am I saying, my reason! I would be very wrong to honor it with this triumph, for it hardly plays a role in any of this. Everything comes out the same when a changeable temperament is irritated by an impetuous wind, but becomes calm again the instant the wind stops blowing. My ardent natural temperament irritates me; my indolent natural temperament pacifies me. I yield to all present impulses; every conflict sets off an intense and short motion in me. As soon as the conflict subsides, the motion ceases. Nothing imparted from outside can prolong itself in me. All the accidents of fortune, all the contrivances of men have little hold on a man thus constituted. To affect me with lasting sorrows, the impulse would have to be renewed each instant. For the intervals, however brief they may be, are enough for me to come back to myself. I am what men please, as long as they can act on my senses. But in the first instant of respite, I again become what nature wanted. Whatever they may do, this is my most constant condition and the one through which, in spite of my fate, I savor a happiness for which I feel myself constituted. I have described this condition in one of my reveries.[13] It suits me so well that I desire nothing other than its duration and fear only to see it troubled. The evil that men have done me in no way bothers me. Only the fear of the evil they can still do to me is capable of disturbing me. But certain that they have no other new hold by which they can affect me with a permanent feeling, I laugh at all their intrigues and enjoy myself in spite of them.

Ninth Walk

Happiness is a permanent condition which does not seem to be made for man here-below. Everything on earth is in constant flux, which permits nothing to take on a constant form. Everything around us changes. We ourselves change, and no one can be assured he will like tomorrow what he likes today. Thus, all our plans for felicity in this life are idle fancies. Let us take advantage of mental contentment when it comes; let us keep from driving it away by our own fault. But let us not make any plans to chain it up, for those plans are pure follies. I have seldom seen happy men, perhaps not at all. But I have often seen contented hearts; and of all the objects which have struck me, that is the one which has made me most content. I believe this is a natural consequence of the power my sensations have over my internal feelings. Happiness has no exterior sign; to recognize it, it would be necessary to see into the heart of the happy man. But contentment is read in the eyes, in the bearing, in the lilt of the voice, in the manner of walking, and seems to be transmitted to the one who perceives it. Is there a sweeter enjoyment than to see a whole people give itself up to joy on a holiday and every heart expand in the broad rays of pleasure which pass rapidly, but intensely, through the clouds of life?[1]

Three days ago Monsieur P.[2] came with extraordinary eagerness to show me the eulogy of Mme Geoffrin by M. d'Alembert.[3] The reading was preceded by long and loud cackles of laughter about the ridiculous affectation of this piece and the silly puns of which he said it was full. Still laughing, he began to read. I listened to him with a serious manner which calmed him; and, seeing that I did not imitate him, he finally stopped laughing. The longest and most strained passage in this piece turned on the pleasure that Mme G. took in seeing children and making them chat. The author rightly drew from this inclination proof of a good natural temperament. But he did not stop there. He roundly accused all those who did not have the same fondness of having a bad natural temperament and of being wicked—to the point of saying that if those being led to the gallows or to the torture wheel were to be asked about it, all would acknowledge they had not loved children.[4] In that context, these assertions had a peculiar effect. Supposing all of that true, was this the occasion on which to say it and was it necessary to sully the eulogy of an estimable woman

with images of tortures and wrongdoers? I easily understood the reason for this disagreeable contention. When Monsieur P. had finished reading, I extolled what had appeared good to me in the eulogy and added that the author, in writing it, had not so much friendship in his heart as hatred.

The next day, the weather being quite nice, though cold, I went for a walk all the way to the Ecole Militaire, expecting to find some mosses in full bloom there. On my way, I mused about the visit of the day before and about M. d'Alembert's pamphlet, in which I was pretty sure this discursive gloss had not been placed unintentionally. And the sole pretext of bringing this brochure to me, from whom they hide everything, sufficiently apprised me of its object. I had placed my children in the foundling home.[5] That was enough to let them misrepresent me as a denatured father; and from that, pushing and pulling this idea, they had little by little drawn the consequence that I evidently hated children. Following in thought this chain of gradual changes, I admired the artfulness with which human industry is able to transform things from white to black. For I do not believe any man has ever loved to see little bambinos frolic and play together more than I. Frequently, in the street and on my walks, I stop to watch their mischief and little games with an interest I see no one share. The very day that Monsieur P. came, an hour before his visit, the two little du Soussoi children had visited me; they were my landlord's[6] youngest children, and the elder of the two was about seven. They had come up to hug me so goodheartedly, and I had returned their embrace so tenderly, that in spite of the disparity in our ages they had sincerely appeared pleased to be with me. As for me, I was carried away with joy to see that my old face had not repulsed them. The youngest even appeared to come back to me so willingly that, more of a child than they, I felt myself already begin to prefer him, and I saw him leave with as much sorrow as if he had belonged to me.

I understand that the reproach of having put my children in the foundling home has, with a little perversity,[7] easily degenerated into that of being an unnatural father and of hating children. However, it is certain that it was the fear of a fate a thousand times worse for them and one otherwise almost inevitable which surely most determined me in this proceeding. Had I been indifferent about what would become of them, since I was incapable of raising them myself, in my situation, I would have had to let them be raised by their mother, who would have spoiled them, and by her family who would have made monsters of them. I still shudder to think about it. What Muhammad made of Zayd[8] is nothing compared with what would have been made of them on my account and the snares that were set for me afterward regarding them sufficiently convince me that such a plan had been formed. In truth, I was then quite far from fore-

seeing those atrocious intrigues; but I knew that the least perilous upbringing for them was that of the foundling home, and I placed them in it. I would do it again, with much less doubt too, if I had to do it again; and I well know that no father is more tender than I would have been toward them, however little habit might have aided nature.

If I have made any progress in understanding the human heart, it is the pleasure I used to take in seeing and observing children which has earned me this understanding. In my youth, this same pleasure barred me somewhat from it, for I played with children so gaily and so good-heartedly that I scarcely dreamed about studying them. But when, growing old, I saw that my decrepit face bothered them, I abstained from pestering them and I preferred to deprive myself of a pleasure rather than disturb their joy. Content then with the satisfaction of watching their games and all their little activities, I have found compensation for my sacrifice in the insights these observations have made me acquire concerning the first and true impulses of nature of which all our learned men understand nothing. I have set down in my writings the proof that I busied myself with this research too carefully not to have done it with pleasure, and it would assuredly be the most unbelievable thing in the world that the *Héloïse* and the *Emile* were the work of a man who did not love children.

I[9] have never had presence of mind or facility of speech; but since my misfortunes, my tongue and my head have become more and more obstructed. The idea and the proper word both escape me, and nothing requires better discernment or more accurate choice of locutions than the remarks we make to children. What increases this obstruction even more for me is the attentiveness of the listeners, the interpretations and the weight they give to everything which comes from a man who, having written expressly for children, is supposedly bound to speak to them only by an oracle.[10] This extreme uneasiness and the ineptitude I feel trouble and disconcert me; I would be much more at ease standing before an Asian Monarch than I am standing before a bambino whom I have to make babble.

Another disadvantage now keeps me more distant from them. And even though I still see them with the same pleasure since my misfortunes, I no longer have the same familiarity with them. Children do not like old age; the sight of decaying nature is hideous to their eyes. Their repugnance, which I perceive, grieves me; and I prefer to abstain from embracing them than to make them uneasy or disgusted. This motive, which acts only upon truly loving hearts, is nothing for all of our learned men and women. Mme Geoffrin troubled herself very little about whether children had any fun with her, as long as they amused her. But for me, this fun is

worse than nothing. It is negative when it is not shared, and I am no longer in the circumstances[11] or of an age in which I would see the little heart of a child expand with mine. If that could happen to me again, this pleasure—having become rarer—would only be more intense for me. And I indeed experienced it the other morning in the way embracing the little du Soussoi children delighted me, not only because the maid who brought them did not greatly impose upon me and I therefore felt less need to watch myself in front of her, but also because the jovial manner in which they greeted me did not leave them and because they appeared to be neither displeased nor bored with me.

Oh! if I still had a few moments of pure affection which comes from the heart, were it only from a child still in a romper; if I could still see in some eyes the joy and contentment of being with me which I used to see so often or of which I would at least be the cause, for how many ills and sorrows would these short but sweet effusions of my heart not compensate me? Ah! I would not be obliged to seek among animals for the look of benevolence which is henceforth denied me among humans. I can judge about this on the basis of very few examples, but examples still dear to my memory. Here is one[12] which I would almost have forgotten in any other condition and which, by the impression it has made upon me, well depicts all my misery. Two years ago, having gone to walk in the vicinity of Nouvelle-France, I pushed further on; then, veering left and wanting to circle Montmartre, I crossed the village of Clignancourt.[13] I was walking along inattentively and dreaming, without looking around me, when all of a sudden I felt something seize my knees. I looked down and saw a little child of five or six years squeezing my knees with all his might while looking up at me in such a friendly and affectionate manner that I was inwardly moved, and I said to myself: "This is how I would have been treated by my own." I took the child in my arms, kissed him several times in a kind of rapture, and then continued on my way. As I was walking along, I felt something missing; a burgeoning need made me retrace my steps. I criticized myself for having left this child so brusquely. I thought I saw a sort of inspiration not to be disdained in his apparently spontaneous action. In short, yielding to temptation, I retraced my steps, ran up to the child, embraced him again, gave him something with which to buy some Nanterre rolls,[14] since a vendor happened to pass by, and I began to make him prattle. I asked him where his father was; he pointed to a man who was hooping barrels. I was about to leave the child and go talk to him when I saw that I had been preceded by an evil-looking man who seemed to me to be one of those spies they keep constantly on my trail. While this man was whispering to him, I saw the eyes of the Cooper fasten upon me atten-

tively in a most unfriendly manner. This instantly constricted my heart, and I left the father and the child even more promptly than I had retraced my steps, but with a less pleasant feeling which altered all my inclinations.

I have, however, felt them return often enough since then. Several times I have gone back through Clignancourt in the hope of seeing this child again, but I have seen neither him nor his father. And I have retained nothing more of this encounter but a somewhat bittersweet recollection, like all the emotions which from time to time still penetrate all the way to my heart and which a painful reaction always succeeds in pushing away.[15]

There is compensation for everything. If my pleasures are few and brief, I surely savor them more deeply when they come than if they were more familiar. I ruminate upon them, so to speak, by frequently remembering them; and, however few they might be, if they were pure and without mixture, I would perhaps be happier than I was in my prosperity. In extreme misery, we find that a little makes us rich. A beggar who finds one gold piece[16] is more moved by it than a rich man who finds a purse of gold. People would laugh if they were to see the impression made upon my soul by the least little pleasures like this which I can conceal from the vigilance of my persecutors. One of these pleasures occurred about four or five years ago, and I never recall it without feeling thoroughly delighted about having turned it to such good account.

One Sunday my wife and I had gone to dine at Porte Maillot. After dinner we crossed through the Bois de Boulogne as far as the Château de la Muette. There we sat down in the shade on the grass and waited for the sun to get lower so as to return quite easily through Passy afterward. About twenty little girls led by a sort of Nun came, some to sit down, others to frolic, quite close to us. While they were playing, a waferman with his drum and board[17] passed by, looking for business. I saw that the little girls greatly coveted the wafers, and two or three among them, who apparently had a few pennies in their possession, asked for permission to play. As the governess was hesitating and arguing, I called to the waferman and said: "Let all of these Young Ladies spin, each in turn, and I will pay you for the whole thing." This word spread a joy through the whole group which alone would have more than reimbursed me, had I used up all my money.

As I saw that they were milling about somewhat confusedly, with the consent of the Governess, I made them all line up on one side and then pass over to the other side, one after the other, as soon as they had made their spin. There were no blanks and at least one wafer came to each of those who would have won nothing, and thus no one could be absolutely discontented; but to make the party still gayer, I secretly told the wafer-

man to use his ordinary skill in an opposite sense by making as many good spins as possible occur and that I would make it up to him. Due to this prearrangement almost a hundred wafers were distributed, although each girl had only a single spin; for on that point I was unrelenting, not wanting anyone to take unfair advantage or to show preferences which would produce dissatisfaction. My wife gently persuaded those who had good spins to share with their companions, by which means the distribution became almost equal and the joy more general.

I begged the Nun to spin also, quite fearful that she might disdainfully reject my offer. She accepted it very graciously, made a spin like the schoolgirls, and took what came to her without a fuss. I was infinitely grateful to her for this and found in it a kind of courtesy which greatly pleased me and which is quite as good, I believe, as that of affected manners. During this whole operation, disputes arose which were brought before my tribunal; and these little girls, coming one after the other to plead their case, gave me the opportunity to note that although not one of them was pretty, the sweetness of some caused their homeliness to be forgotten.

We finally separated, very pleased with each other; and that afternoon was one of those of my life which I remember with the greatest satisfaction. Besides, the party was not ruinous. To the contrary, for the thirty copper coins it cost me at the most, I had more than a hundred gold pieces worth of contentment. So true is it that true pleasure is not measured by the expense and that joy is more a friend of pennies than of large gold coins. Several other times I have come back to the same place, at the same time, hoping to meet the little group there again; but that has never occurred.

This calls to mind another similar kind of amusement, the memory of which has remained with me from much longer ago. It was during the unfortunate time when, thrust in among the wealthy and the literary people, I was sometimes reduced to sharing their sad pleasures. I was at the Château de la Chevrette for the master of the house's name day.[18] His whole family had come together to celebrate it, and all the pomp of noisy pleasures was put in motion for this purpose. Games, pageants, banquets, fireworks, nothing was spared. We had no time to catch our breath and instead of having fun, our heads were spinning. After dinner we went for a breath of air along the avenue; a sort of fair had been set up. There was dancing; the gentlemen deigned to dance with the peasant girls, but the Ladies kept their dignity. Someone was selling gingerbread. A young man from the group took it into his head to buy some to throw, one after the other, into the middle of the crowd. And the others took so much pleasure in watching all these oafs rush headlong into each other, fight with each

other, and knock each other over to get some gingerbread that they all wanted to procure the same pleasure for themselves. Gingerbread flying right and left, girls and boys running, piling up on each other, mangling each other—that appeared charming to everyone. I did as the others through mortification, although I did not find it as entertaining as they. But soon sick of emptying my pocket to get people crushed, I left the well-bred group and went off to walk alone through the fair. The variety of objects entertained me for a long time. Among others, I noticed five or six Savoyard boys around a little girl who still had a dozen sorry-looking apples on her tray[19] of which she would very much have liked to rid herself. For their part, the Savoyards would very much have liked to rid her of them; but they had only two or three pennies between them, and that was not enough to make a great dent in the apples. This tray[20] was the garden of the Hesperides for them, and the little girl was the dragon guarding it.[21] This comedy entertained me for a long time; I finally brought about its denouement by paying the little girl for the apples and having her distribute them to the little boys. I then experienced one of the sweetest sights which can gratify a man's heart, that of watching joy united with the innocence of age spread all about me. For even those who were looking on shared it as they watched it; and I who shared this joy so cheaply had, in addition, that of sensing that it was my handiwork.

In comparing this entertainment with the ones I had just left, I felt with satisfaction the difference that separates healthy tastes and natural pleasures from those which opulence engenders and which are hardly anything but pleasures of mockery and exclusive tastes engendered by scorn. For what sort of pleasure could one take in seeing herds of men degraded by abject poverty pile up on each other, choke each other, brutally mangle each other to grab avidly at some pieces of gingerbread trampled underfoot and covered with mud?

For my part, when I have carefully thought about the kind of sensual pleasure I savored on these occasions, I have found that it consisted less in a feeling of beneficence than in the pleasure of seeing contented faces. This sight has a charm for me which, even though it penetrates all the way to my heart, seems to be solely one of sensation. If I do not see the satisfaction I cause, even though I am sure of it, I only half enjoy it. It is even a disinterested pleasure for me which does not depend on the part I might have in it. For in popular celebrations, the pleasure of seeing gay faces has always eagerly attracted me. This expectation, however, has often been frustrated in France, where this nation which claims to be so gay shows so little gaiety in its amusements. I often used to go to dance halls to see the lower classes dance; but their dances were so boring, their bearing so dole-

ful, so awkward, that I would leave more depressed than delighted. But in Geneva and in Switzerland, where laughter is not constantly wasted on foolish acts of malice, everything in the celebrations exudes contentment and gaiety; abject poverty does not bring its hideous face to them nor ostentation show its insolence. Well-being, brotherhood, and concord dispose hearts to expand; and often, in the raptures of innocent joy, strangers greet each other, embrace, and invite one another to enjoy the pleasures of the day. For me to enjoy these friendly celebrations, I do not need to be part of them. It is sufficient for me to see them. In seeing them, I share in them; and among so many gay faces, I am quite sure there is no heart gayer than mine.

Although that is only a pleasure of sensation, it certainly has a moral cause. The proof is that this same sight, instead of gratifying or pleasing me, can tear me apart with sorrow and indignation when I know that these signs of pleasure and joy on the faces of the wicked are only indications that their malice is satisfied. Innocent joy is the only one whose signs gratify my heart. Those of cruel and mocking joy break and afflict it, even though this joy has nothing whatever to do with me. Undoubtedly, these signs could not be exactly the same, since they come from such different principles. But they are, after all, equally signs of joy, and their perceptible differences are assuredly not proportionate to those of the impulses they stir up in me.

Those of sorrow and pain are even more poignant to me, to the point that it is impossible for me to endure them without being perturbed by emotions perhaps even more intense than those they represent. My imagination, strengthening sensation, makes me identify with the suffering being and often causes me more anguish than even he feels. A discontented face is still a sight impossible for me to endure, especially if I have reason to think that this discontentment concerns me. I am unable to say how many gold coins were extorted from me by the grumbling and sulking manner of valets who serve grudgingly in the houses into which I formerly had the foolishness to allow myself to be drawn and in which the servants always made me pay very dearly for the hospitality of the masters. Always too affected by discernible objects, especially by those which bear a sign of pleasure or pain, of benevolence or aversion, I allow myself to be drawn on by these external impressions, often without being able to avoid them except by flight. A sign, a gesture, a glance from a stranger, suffices to disturb my pleasures or to calm my troubles. I am my own only when I am alone. Apart from that I am the plaything of all those around me.

Before, when I saw only benevolence in everyone's eyes, or, at the worst, indifference in those to whom I was unknown, I lived in the world

with pleasure. But today, when no less trouble is taken to point out my face to the people than to mask my natural temperament from them, I cannot set foot in the street without seeing myself surrounded by rending objects. With long strides, I rush to get to the country. As soon as I see greenery, I begin to breathe. Need anyone be astonished that I love solitude? I see only animosity on the faces of men, whereas nature always smiles at me.

It must be admitted, however, that I still feel pleasure in living in the midst of men as long as my face is unknown to them. But that is a pleasure which is scarcely allowed me. A few years ago, I still liked to walk through villages in the morning and see the farm-workers mending their flails or the women on their stoop with their children. There was something in this sight which touched my heart. I would sometimes stop, without being aware of it, to watch the little activities of these good people and I would feel myself sigh without knowing why. I do not know whether they saw me sensitive to this tiny pleasure and wanted to take even that from me, but from the change I notice on the faces as I pass by and from the way I am looked at, I am simply forced to understand that they have taken great care to remove this anonymity from me. The same thing happened to me, and in an even more conspicuous way, at the Invalides.[22] This fine establishment has always interested me. I never see, without tenderness and veneration, these groups of good old men who, like those of Lacedaemon, can say:

> Formerly, we were
> Young, valiant, and bold.[23]

One[24] of my favorite walks was around the Ecole Militaire, and I was pleased to meet here and there some Disabled Veterans who, having kept the old military decorum, saluted me as I passed by. This salute, which my heart returned a hundredfold, gratified me and augmented the pleasure I had in seeing them. As I am unable to hide anything that moves me, I often spoke about the disabled veterans and the way seeing them affected me. No more was needed. After a short time, I noticed that I was no longer unknown to them or, rather, that I was even more unknown to them, since they saw me with the same eye as the public. No more decorum, no more salutations. A repellent manner, a glowering look had taken the place of their earlier graciousness. The old frankness of their trade not allowing them to cover their animosity with a sneering and treacherous mask like the others, they openly showed me the most violent hatred; and such is the extreme of my misery that I am forced to distinguish in my esteem those who least disguise their fury from me.

Since that time I walk with less pleasure near the Invalides. However, as

my feelings for them do not depend on theirs for me, I still do not see these former defenders of their fatherland without respect or interest. But it is quite hard for me to see myself so poorly repaid by them for the justice I render them. When by chance I meet one of them who has escaped the common instructions or who, not knowing my face, shows no aversion to me, the honest greeting of this single one makes up for the surly bearing of the others. I forget them so as to concern myself with him alone, and I imagine that he has a soul like mine, which hatred would not be able to penetrate. I had this pleasure again last year when crossing the water to go walk on the Ile aux Cygnes.[25] A poor old disabled veteran was in the boat waiting for enough people to cross over. I stepped forward and told the boatman to leave. The water was rough, and the crossing was long. I almost dared not say a word to the veteran for fear of being rudely treated and rebuffed as usual, but his forthright manner reassured me. We chatted. He appeared to me a man of sense and of morals. I was surprised and charmed by his open and affable tone. I was not accustomed to so much kindness; my surprise ceased when I learned he had only recently arrived from the provinces. I realized that they had not yet showed him my face and given their instructions. I took advantage of this anonymity to converse for a few moments with a man, and I felt, in the delight I found in it, how much the rarity of the most common pleasures is capable of augmenting their value. As he was stepping out of the boat, he got his two miserable pennies ready. I paid for the passage and begged him to put them away, trembling lest I rile him. That did not happen. To the contrary, he appeared moved by my attentiveness, and especially by that which I also had of helping him step out of the boat, since he was older than I. Who would believe I was enough of a child to weep with joy? I was dying to put a twenty-four copper piece in his hand for some tobacco; I never dared. The same shame which held me back has often prevented me from doing good works which would have filled me with joy and from which I have abstained only in deploring my foolishness. This time, after having left my old disabled veteran, I soon consoled myself by thinking that I would have acted against my own principles, so to speak, by mixing with honorable things a prize of money which degrades their nobility and sullies their disinterestedness. We must be eager to help those who need it, but in the ordinary business of life, let us allow natural benevolence and graciousness each do its work, without anything venal or mercenary ever daring to approach such a pure source to corrupt or vitiate it. They say that in Holland the people require payment to tell you the time and show you the way. Those who would thus traffic in the simplest duties of humanity must be a despicable people indeed.

I have observed that it is in Europe alone that hospitality is sold. In all of Asia they lodge you for nothing; I understand that one does not so easily find all one's comforts there. But is it nothing to say to oneself: "I am a man, received among humans; it is pure humanity which sets a table before me"? Small privations are endured without pain when the heart is treated better than the body.

Tenth Walk

Today, Palm Sunday, it is precisely fifty years since I first met Mme de Warens.[1] She was twenty-eight then, having been born with the century.[2] I was not yet seventeen,[3] and my burgeoning temperament, of which I was still unaware, gave new warmth to a heart naturally full of life. If it was not surprising that she could have benevolent feelings for an intense, but mild and modest young man with a pleasant enough face, it was even less surprising that a charming woman, full of wit and grace, could inspire in me, along with gratitude, more tender feelings which I did not perceive. But what is more unusual is that this first moment determined my whole life and by an inevitable chain of events shaped the destiny of the rest of my days. My soul, whose most precious faculties my organs had not developed, still had no fixed form. It awaited, with a sort of impatience, the moment which would give it that form. This moment, accelerated by our encounter, did not, however, come at once. And due to the simplicity of morals which education had given me, I saw this delightful but fleeting state in which love and innocence inhabit the same heart prolonged in me for a long time. She had sent me away.[4] Everything called me back to her; I had to come back to her.[5] This return determined my fate, and for a long time yet before possessing her, I only lived in and for her. Ah! if I had sufficed for her heart as she sufficed for mine, what peaceful and delightful days we might have spent together! We did pass such days but how short and fleeting they were, and what a destiny followed them! No day passes but what I recall with joy and tenderness this unique and brief time of my life when I was myself, fully, without admixture and without obstacle, and when I can genuinely say that I lived. Almost like that praetorian Prefect who, disgraced under Vespasian, went away to end his days peacefully in the country, I can say: "I have spent seventy years on earth and lived seven of them."[6] Without this short but precious time, I would perhaps have remained uncertain about myself. For, weak and without resistance all the rest of my life, I have been so troubled, tossed about, plagued by the passions of others that, almost passive in such a stormy life, I would have difficulty in unraveling what there is of my own in my own conduct. To such an extent hard necessity has unremittingly borne down upon me. But during those few years, loved by a woman full of desire to please and of

gentleness, I did what I wanted to do, I was what I wanted to be; and through the use I made of my leisure, aided by her lessons and example, I was able to give to my still simple and new soul the form which better suited it and which it has always kept. Fondness for solitude and contemplation arose in my heart along with the expansive and tender feelings made to be its nutriment. Tumult and noise constrict and stifle them; calm and peace restore and exalt them. I need to collect myself in order to love. I induced "Mama" to live in the country. An isolated house on the slope of a valley was our refuge; and there, for a period of four or five years, I enjoyed a century of life and a pure and full happiness which covers with its charm everything dreadful in my present lot. I needed a friend suited to my heart; I possessed her. I had longed for the country; I obtained it. I could not bear subjection; I was perfectly free and better than free, for bound only by my affections, I did only what I wanted to do. All my time was filled with loving concerns or rustic occupations. I desired nothing but the continuation of such an enjoyable situation. My only worry was the fear it might not last for long; and this fear, born of the instability of our situation, was not without foundation. From then on I thought about how to take my mind off this worry and, at the same time, acquire resources to ward off its effect. I thought that a provision of talents was the surest resource against misery, and I resolved to use my leisure to put myself in a position, if it were possible, to give back one day to the best of women the help I had received from her.

BOTANICAL WRITINGS

Introduction

The first misfortune of Botany is to have been regarded since its birth as a part of Medicine.[1] As a result people have thought only to find or to attribute virtues to plants and have neglected the knowledge of plants themselves; for how are we to submit to the immense and continual activity which this research requires, and at the same time to the sedentary work of the laboratory and the treatment of the sick, by which one attains certainty about the nature of plant substances and their effects on the human body?[2] This false manner of understanding Botany has for a long time restricted the study to the point of limiting it almost to common plants, and reduced the vegetal chain to a small number of interrupted links. Still these links themselves have been very poorly studied, because people have looked only at matter and not organization. How can one be very concerned with the organic structure of a substance, or rather of a ramified mass that one thinks only of grinding in a mortar? People looked for plants only to find remedies; they did not look for plants but for simples. It was very well done, it will be said, but the result was no less that if people knew remedies very well, they understood plants badly; and that is all that I am suggesting here.

Botany was nothing, there was no study of Botany, and those who prided themselves most on knowing plants had no idea, either of their structure or of vegetal economy. Each knew by sight five or six plants of his region to which he gave names at random enriched by marvelous virtues which it pleased him to attribute to them, and each of these plants changed into a universal panacea which alone sufficed to make the entire human species immortal. These plants transformed into balm and plasters disappeared promptly, and soon gave way to others to which the newcomers attributed the same effects in order to distinguish themselves. Sometimes they decorated a new plant with old virtues, and sometimes old plants proposed under new names sufficed to enrich new charlatans. These plants had different common names in each region, and those who recommended them for their drugs, gave them at most only the names by which they were known in the place they inhabited; and when their recipes ended up in other countries, people did not know anymore which plant was meant; each substituted one according to his fancy, without any care except to

give it the same name. This is the entire art which the Myrepsuses, the Hildegardes, the Suardi, the Villanovas, and the other Doctors[3] of this time put into the study of plants of which they spoke in their books, and it would be difficult perhaps for people to recognize even one of their names or descriptions.

With the rebirth of Letters everything disappeared to make way for ancient books; there was nothing good or true except what was in Aristotle and Galen.[4] Instead of studying plants on the earth, people studied them only in Pliny and Dioscorides, and there was nothing more common in the Authors of this time than to see them deny the existence of a plant on the grounds solely that Dioscorides had not spoken of it.[5] But it was necessary nevertheless to find these learned plants[6] in nature in order to use them according to the precepts of the master. Hence people began to stir themselves, began to search, to observe, and to conjecture and no one failed to expend all his efforts in finding in the plant that he had chosen the characteristics described by his author; and since the translators, the commentators, the practitioners rarely agreed on the choice, they gave twenty names to the same plant, and to twenty plants the same name, each maintaining that his was the genuine one, and that all the others, not being the one which Dioscorides had described, should be proscribed from the face of the earth. There finally resulted from this conflict more attentive research, and some good observations which, to tell the truth, deserved to be preserved, but at the same time there was such a chaos of nomenclature that the Physicians and Herborists had completely ceased to understand each other: there could be no enlightening communication; there were only disputes about words and names, and even all the useful research and descriptions were lost due to the inability to decide what plant each author had talked about.

True Botanists, such as Clusius, Cordus, Cesalpin, Gesner, nevertheless began to appear and to produce good and instructive books on this subject in which we already find some traces of method.[7] And it was certainly a loss that these pieces became useless and unintelligible solely on account of the disagreement of names. But from the very fact that the writers began to gather together the species and to separate the genera, each according to his manner of observing the appearance[8] and outward structure, there resulted new inconveniences and a new obscurity, because in setting his nomenclature on the basis of his method, each author created new genera, or separated the old ones according to what the character of his own method required. The species and genera were consequently all so mixed up that there was almost no plant which did not have as many different names as authors who had described it; a situation that made the study of

the concordance as long as and often more difficult than that of the plants themselves.

Finally there appeared those two illustrious brothers who alone have done more for the progress of Botany than all the others together who preceded them and even those who followed, up to Tournefort.[9] Unique men, whose immense knowledge and solid works devoted to Botany made them worthy of the immortality their works have acquired for them. For as long as this natural science does not fall into obscurity, the names of Jean and Gaspard Bauhin will live with it in the memory of men.[10]

These two men undertook, each in his way, a universal history of plants, and what most immediately relates to this article, each undertook to join to it a synonymy, that is to say, an exact list of the names which each plant bore in all the authors who had preceded them. This work became absolutely necessary so that we could profit from the observations of each of them; because without this it was almost impossible to follow and distinguish clearly each plant in the face of so many different names.

The elder nearly executed this enterprise in the three folio volumes that were printed after his death, and he joined to it such an accurate review, that he rarely is mistaken in his synonyms.

His brother's plan was still more vast, as is evident in the first volume he produced which allows us to judge the immensity of the entire work, had he had the time to finish it; but apart from the volume of which I was just speaking, we have only the titles of the rest[11] in his pinax, and this pinax, the result of forty years' work, is still today the guide of all those who want to work on this material and consult the ancient authors.

As the nomenclature of the Bauhins was formed only by the titles of their chapters, and as these titles ordinarily comprised several words, there arose the practice of using only rather long, unclear phrases for the names of plants, which rendered this nomenclature not only protracted and cumbersome, but pedantic and ridiculous. I acknowledge there would have been some advantage in this had these phrases been better composed; but having been indiscriminately composed from the names of the places where these plants originated, the names of the people who had sent them, and even of the names of other plants with which people found they had some similarity, these phrases were the source of new perplexity and new questions, since the knowledge of a single plant demanded that of several others, to which its phrase sent one back, and whose names were no more definite than its own.

Meanwhile, extensive voyages incessantly enriched Botany with new treasures, and while the ancient names already overwhelmed the memory, it was constantly necessary to invent new ones for the new plants that were

being discovered. Lost in this immense labyrinth, Botanists forced to search for a guiding thread finally attached themselves seriously to method; Herman, Rivin, Ray each proposed his own; but the immortal Tournefort overshadowed them all;[12] he was the first to arrange the entire vegetal realm systematically; and in part reforming nomenclature, combined it through his new genera with those of Gaspard Bauhin. But far from dispensing with its long phrases, he either added new ones to it or he burdened the old ones with additions which his method forced him to make. Hence was introduced the barbaric practice of linking the new names to the old by a contradictory *qui quae quod*, which made two completely different genera out of the same plant.

Dens Leonis *qui* pilosella folio minus villoso: Doria *quae* Jacobaea orientalis limonii folio: Titanokeratophyton *quod* Lithophyton marinum albicans.[13]

Thus nomenclature overloaded itself. The names of plants became not only phrases but complete sentences. I will cite only one of Plukenet which will show that I am not exaggerating.[14] "*Gramen* myloicophorum caroliniianum seu gramen altissimum, panicula maxima speciosa, è spicis majoribus compressiusculis utrinque pinnatis blattam molendariam quodam modo referentibus, composita, foliis convolutus mucronatis pungentibus." *Almag*. 137.[15]

It would have been all over for Botany if these practices had been followed; [Botany] having become absolutely unbearable; nomenclature was not able to subsist in this state, and a reform was urgently necessary if the richest, the most appealing, the most accessible of the three parts of natural History was not to be abandoned.[16]

Finally M. Linnaeus, replete with his sexual system and the vast ideas that it had suggested to him, formed the project of a general recasting for which the entire world felt the need, but which no one had dared to undertake.[17] He did more; he executed it, and after having prepared in his *Critica Botanica* the rules according to which this work ought to be conducted, he fixed in his *Genera plantarum* the genera of plants, then the species in his *Species*; so that keeping all the old names which could accord with these new rules and recasting all the others, he finally established an enlightened nomenclature, founded on the true principles of the art that he himself had exposed. He conserved all those of the old genera that were truly natural, he corrected, simplified, reunited or divided the others as their true character required. And in the creation of names, he sometimes even followed his own rules a bit too severely.

With regard to species, it was indeed necessary to have descriptions and differentiations in order to determine them; thus the phrases always remained indispensable, but being limited to a small number of technical,

well-chosen, and well-adapted words, he made a point of making good, brief definitions drawn from the true characteristics of the plant, rigorously banishing everything alien to it. For this purpose it was necessary to create, so to speak, a new language for Botany which eliminated the long circuit of words[18] that one sees in the old descriptions. People complain that the words of this language were not all in Cicero. This complaint would be reasonable if Cicero had written a complete treatise on Botany. These words are nonetheless all Greek or Latin, expressive, short, sonorous, and by their extreme precision even form elegant constructions. It is in the daily practice of the art that one senses the great advantage of this new language, as convenient and necessary to Botanists as is that of Algebra to Geometers.[19]

Up to then M. Linnaeus had determined the majority of known plants, but had not named them: since to define a thing is not to name it; a phrase will never be a true name and cannot be used as such. In response to this deficiency he invented trivial[20] names which he joined to those of the genera in order to distinguish the species. In this manner the name of each plant is never composed of more than two words, and these two words alone, chosen with discernment and applied with precision often made the plant better to recognize than did the long phrases of Micheli and Plukenet.[21] In order to recognize it even better and more uniformly, one doubtless needs to know the phrase, but one no longer needs to repeat it at every turn when it is necessary only to name the object.

Nothing was more dismal and ridiculous when a woman or one of those men who resemble them would ask you the name of a herb or a flower in a garden than the necessity of spitting out in response a long string of Latin words which resembled magical incantations; a disadvantage sufficient to discourage these frivolous persons from a charming study offered with such a pedantic display.

However necessary, however advantageous this reform may have been, it required no less than the profound knowledge of M. Linnaeus to accomplish it with success, and the celebrity of this great naturalist to cause it to be universally adopted. It has nevertheless encountered resistance; it encounters it still. It could not be otherwise; his rivals in the same career regard this adoption as an acknowledgement of inferiority that they are careful not to make; his nomenclature seemed to derive so much from his system, that one scarcely thinks of separating the one from the other. And Botanists of the first rank, who think themselves obliged by dignity not to adopt the system of anyone and to have each his own, will not sacrifice their pretensions to the progress of an art of which the love in those who profess it is rarely disinterested.

National jealousies still stand in the way of the admission of a foreign

system. One believes oneself obliged to support the illustrious of one's country, especially when they have ceased to live; because even the amour-propre which painfully suffered their superiority during their life feels honored by their glory after their death.

Despite all this, the great convenience of this new nomenclature and the utility that its use has made known has made it almost universally adopted in all of Europe sooner or later, in truth, but finally nearly everywhere, even in Paris. M. de Jussieu has just established it at the jardin du Roi, hence preferring public utility to the glory of a new recasting which seemed to demand the method of natural families of which his illustrious uncle is the author.[22] It is not that this Linnaean nomenclature does not still have its defects and does not leave itself open to criticism, but in waiting for a more perfect one to be found which is not lacking in any respect, it is a hundred times more worthwhile to adopt this one than to have none, or to fall back into the phrases of Tournefort and Gaspard Bauhin. I even have difficulty believing that a better nomenclature could henceforth have enough success to displace this one, to which the Botanists of Europe are already all accustomed, and it is because of the double chain of habit and convenience that they would renounce it with still more difficulty than they had in adopting it. In order to effect such a change it would be necessary to be an author whose credit effaced that of M. Linnaeus, and to whose authority all Europe was willing to submit a second time, which seems unlikely to me. Since if his system, as excellent as it might be, were adopted by only a single nation, it would throw Botany into a new labyrinth, and [would] negate more than it would accomplish.

Even the work of M. Linnaeus, while immense, still remains imperfect, in as much as it does not include all the known plants, and has not been adopted by all Botanists without exception: for the books of those who do not submit to it demand on the part of their readers the same work of concordance into which they were forced by the books which preceded. We are obliged to M. Crantz, despite his passion against M. Linnaeus, for having adopted his nomenclature even though he rejected his system.[23] But M. Haller, in his great and excellent treatise on alpine plants, rejects both the one and the other at the same time, and M. Adanson does even more; he takes a completely new nomenclature and furnishes absolutely no cross-references to connect it with that of M. Linnaeus.[24] M. Haller always cites the genera and sometimes the species phrases of M. Linnaeus, but M. Adanson cites neither genus nor phrases. M. Haller adheres to an exact synonymy by means of which, when he does not include the phrase of M. Linnaeus, one can at least find it indirectly by the relation of the synonyms. But M. Linnaeus and his books are entirely worthless for M. Adan-

son and his readers; he provides no cross-references by means of which one could find out about them. Hence it is necessary to choose between M. Linnaeus and M. Adanson who excludes him without mercy, and throw all the books of the one or the other in the fire. Or it is necessary to undertake a new work which will be neither short nor easy in order to bring into accord two nomenclatures which offer no point of contact.

Further, M. Linnaeus has never provided a complete synonymy. He has been content for the plants known earlier to cite the Bauhins and Clusius, and [to provide a reference to] an illustration of each plant. For the more recently discovered exotic plants he has cited one or two modern authors and the illustrations of Rheedi, Rumphius, and some others, and has stopped there.[25] His enterprise did not require of him a more extended compilation, and it was sufficient that he provided a single certain reference for each plant of which he spoke.

Such is the present state of things. Now on this account I ask every sensible reader how it is possible to attach oneself to the study of plants, while rejecting that of nomenclature? It is as if one wanted to become knowledgeable about a language without wanting to learn its words. It is true that names are arbitrary, that the knowledge of plants does not necessarily depend at all on that of nomenclature, and that it is easy to assume that an intelligent man could become an excellent Botanist even if he did not know a single plant by its name. But that a lone man, without books and without any assistance from communicated enlightenment, could on his own succeed at becoming [even] a very mediocre Botanist—this is a ridiculous assertion and an impossible enterprise to execute. The issue is whether three centuries of studies and observations should be lost for Botany, whether three hundred volumes of illustrations and descriptions ought to be thrown into the fire, whether the knowledge acquired by all the savants, who have devoted their wealth, their life, and their sleepless nights to immense, costly, troublesome, and perilous voyages ought to be useless to their successors, and if each always departing from zero as his starting point, will be able to arrive by himself at the same knowledge as a long succession of researches and studies has diffused in the mass of the humanity. If this is not so, and the third and most appealing part of natural History merits the attention of the curious, tell me how one will set about making use of the knowledge acquired before, unless one begins by learning the language of the authors and by knowing to what objects the names employed by each of them relate.[26] Thus to allow the study of Botany and reject that of nomenclature is to fall into the most absurd contradiction.

Fragments for a Dictionary of Terms of Usage in Botany

ABRUPTE [Abrupt]. The name *Abrupt* is given to pinnate leaves, at the tip of which the single terminal leaflet that they ordinarily have is missing.

ABRUVOIRS, or goutieres [Water Channels or gutters]. Holes that form in the rotten wood of stumps, which retain rainwater and finally rot the rest of the trunk.

ACAULIS [Acaulous]. Without a stem.

AIGRETTE [Pappus]. Tuft of simple filaments or plumes which crown the seeds in several genera of composites and other flowers. The Pappus is either sessile, that is to say, directly attached around the embryo which carries them; or pedicellate, that is to say, carried by a stalk called *Stipes* in Latin which holds it raised above the embryo.[27] The Pappus serves first as calyx to the floret, then it [the pappus] grows and dislodges it [the corolla] to the degree that it withers so that it does not rest under[28] the seed and does not prevent it from ripening; it protects this same naked seed from rainwater which could cause it to rot; and when the seed is ripe, it serves as a wing to be carried and disseminated afar by the winds.[29]

AILÉE [Winged]. A leaf composed of two opposed leaflets on the same petiole is called a winged leaf.[30]

AISSELLE [Axil]. Acute or right angle, formed by one branch with another branch, or with the trunk, or by a leaf on a branch.

AMANDE [Kernel]. Seed enclosed in a pit.

ANDROGYNE [Androgynous]. Which carries male and female flowers on the same stalk. These words *Androgynous* and *Monoecious* signify absolutely the same thing, except that in the first case one pays more attention to the different sex of the flowers [in an inflorescence], and in the second to their being joined together on the same individual.

ANGIOSPERME [Angiosperm], with enclosed seeds. This term applies equally to fruits as capsules and to fruits as berries.

ANTHERE [Anther]. Capsule or container borne by the filament of the stamen, which opening at the moment of fecundation,[31] spreads the prolific powder.[32]

ANTHOLOGIE [Anthology]. Discourse on flowers. It is the title of a

book by Pontedera, in which he combats with all his force the sexual system that he would doubtless have himself adopted, if the writings of Vaillant and Linnaeus had preceded his own.[33]

APHRODITES [Anaphrodites].[34] M. Adanson gives the name to the animals of which each individual reproduces its like by generation, but without any exterior act of copulation or fecundation, such as some aphids, the conches, the majority of worms without sex, the insects which reproduce without generation, but by the segmentation of a part of their bodies.[35] In this sense plants which multiply by cuttings or by buds growing below ground on bulbs can also be called Anaphrodites. This irregularity so contrary to the ordinary course of nature, poses difficulties for the definition of species: is it that properly speaking there are no species in nature, but only individuals?[36] But one can doubt, I believe, if there are absolutely *Anaphroditic* plants, that is to say, which really have no sex and cannot multiply themselves by copulation. What's more, there is this difference between these two words, *Anaphroditic* and *Asexual*, that the first applies to plants that having no sex at all cannot multiply; while the other applies only to those which are neuter or sterile and incapable of reproducing their kind.[37]

APHYLLE [Aphyllous]. One could say defoliated; but *defoliated* signifies [a plant] from which one has removed the leaves, and *Aphyllous, one that has none at all.*

ARBRE [Tree]. Plant of a considerable size, which has only one main trunk divided into major branches.

ARBRISSEAU [Shrub]. Woody plant of lesser size than the tree, which normally divides from the root into several stems. In autumn trees and shrubs sprout buds in the axils of the leaves which develop in the spring and expand into flowers and fruits, the difference that distinguishes them from subshrubs.

ARTICULÉ [Articulated]. Stem, roots, leaves, siliqua; used when one of these parts of the plant is cut by nodes occurring at intervals.

AXILLAIRE [Axillary]. Which emerges from an axil.

BALE [Husk, Glume]. Calyx in the grasses.

BAYE [Berry]. Fleshy or succulent fruit with one or several seed chambers.

BOULON [Head]. Group of florets gathered together in a head.

BOURGEON [Leaf Bud]. Germ of leaves and branches.

BOUTON [Flower Bud]. Germ of flowers.

BOUTURE [Cutting]. Is a young branch which is cut from certain pithy trees, such as the fig, the willow, and the wild quince, which takes in the ground without root. The success of cuttings depends more on their abil-

ity to produce roots, than on the abundance of the pith of their branches; since the orange, the boxwood, the yew, and the juniper which have little pith, take easily from cuttings.

BRANCHES [Branches]. Pliant and elastic arms of the body of the tree, it is they which give it its form; they are either alternate, or opposed, or whorled. The bud expands little by little into collaterally arranged branches composed of the same parts as the stem, and it is claimed that the agitation of the branches caused by the wind is to trees what the impetus of the heart is to animals. We distinguish:

1st. The main branches, which attach directly to the trunk and from which all the others arise.
2nd. The woody branches, which being the largest and full of regular buds, give the form to a fruit tree and ought to preserve it in part.
3rd. The fruit-bearing branches are the weakest and have round buds.
4th. The twigs are short and thin.
5th. The suckers are large, straight, and long.
6th. The Spineless are long and promise no fecundity.
7th. The August branch is that which, after the month of August, has started to be born, hardens, and becomes blackish.
8th. Finally, the false-wood branch is large in the place where it should be thin, and gives no sign of fecundity.

BULBE [Bulb]. Is an orbicular root composed of several skins or tunics enclosed one within another. Bulbs are underground buds rather than roots; they have their own true roots, generally almost cylindrical and branched.

CALICE [Calyx]. External envelope or support of the other parts of the flower, etc. Just as there are plants that have no calyx at all, there are others whose calyx metamorphoses little by little into the leaves of the plant, and reciprocally there are plants whose leaves change into a calyx: this is what is seen in the family of some Ranunculi, such as Anemone, Pulsatilla.

CAMPANIFORME, ou Campanulée [Campanulate].—See *Cloche*.

CAPILLAIRES [Capillaries]. One calls capillary leaves in the Moss family those which [resemble] loosened hair. This is what one often finds denoted in the synopsis of Ray, and in the histoire des Mousses of Dillen, by the Greek word *Trichodes*.[38]

One also gives the name Capillaires to a branch of the Fern family, which bear like them their fructification on the backs of the leaves, and are distinguished only by the stature of the plant which comprises it, much smaller in the capillaires than in the ferns.

CAPRIFICATION [Caprification]. Fecundation of female flowers of a kind of dioecious Fig by the powder of stamens of the individual male

called a caprifig.[39] By means of this operation of nature, aided by human industry, figs thus fecundated grow larger, ripen, and give a better and more abundant harvest than would otherwise have been obtained.

The marvel of this operation consists in that, in the Fig genus, the flowers being enclosed in the fruit, only those which are hermaphrodites or androgynes seem to be able to be fecundated; since when the sexes are completely separated, one does not see how the powder of male flowers could penetrate its own covering[40] and that of the female fruit down to the pistils which it ought to fecundate; it is an insect which undertakes this transport. A kind of gall-insect unique to the wild fig lays and hatches its eggs there, covers itself with powder from the stamens, carries it through the opening of the fig, past the scales which guard the entrance, to the interior of the fruit, and there, this powder finding no further obstacle, lays itself down on the organ destined to receive it.

The history of this operation was detailed in the first instance by Theophrastus,[41] the first, the most knowledgeable savant, or, to say it better, the sole and true Botanist of antiquity, and after him by Pliny among the ancients. Among the moderns by Jean Bauhin, then by Tournefort on the same grounds,[42] after him by Pontedera, and by all the compilers of Botany and natural History who have done no more than transcribe the account by Tournefort.[43]

CAPSULAIRE [Capsular]. Capsular plants are those whose fruit is in capsules. Ray made this division his nineteenth class, *Herba vasculifera*.

CAPSULE [Capsule]. Pericarp of a dry fruit; since one never gives the name capsule, for example, to the rind of the Pomegranate, even though it is as dry and hard as many other capsules, because it encloses a soft fruit.

CAPUCHON, CALYPTRA [Hood]. Pointed cap which ordinarily covers the capsule of Mosses.[44] The hood is first attached to the capsule, but later it detaches itself and falls when the capsule approaches maturity.

CARYOPHYLLÉE [Caryophyllous]. Caryophyllous flower or a carnation.

CAYEUX [Bulbils]. Bulbs by which several lilies and other plants reproduce themselves.

CHATON [Catkin]. Assemblage of male or female flowers attached spirally to an axis or common receptacle, around which these flowers take the form of a cat's tail. There are more trees with male catkins than there are [trees] which also have female ones.

CHAUME (Culmus) [Culm]. Particular name by which the stem of the grasses is distinguished from those of other plants, and which is defined by its jointed and hollow character, although many other plants have this same characteristic and the Sedges and various grasses of the Indies do not

have it. One can add that the culm is never branched, to which there is however an exception in the *Arundo calamagrostis* and in others.[45]

CLOCHE [Bell]. Flowers in a bell or campanulate [shape].

COLORÉ [Colored]. The calyxes, glumes, scales, coverings, the outer parts of plants which are green or gray, are commonly said to be colored when they have a color more brilliant and vibrant than their like, such as the calyxes of Circaea, Mustard, Carlina; the envelopes of Astrantia: the corolla of the white and yellow Ornithogalum is green below and colored above; the scales of Xeranthemum are so colored that one would take them for petals, and the calyx of Polygala, at first very colored, loses its color little by little, and finally takes on that of an ordinary calyx.

CORDON [Cord] umbilical in the maidenhair and ferns.[46]

CORNET [Cornet or Cone]. Kind of infundibuliform nectary.

CORYMBE [Corymb]. Arrangement of the flower which is intermediate between the umbel and panicle; the pedicules are graduated the length of the stem as in the panicle, and all reach the same height, forming a flat surface at their summit.

The corymb differs from the umbel, in that the pedicels which form it instead of leaving from the same center, leave at different heights, at different points on the same axis.

CORYMBIFERES [Corymbiferous]. It would appear that this word ought to designate plants with flat-topped flowers, just as *umbellifers* designates the plants with parasol-shaped flowers. But usage has not authorized this analogy; the meaning of which I am going to speak is not used very much, but as it was employed by Ray and other Botanists, it is necessary to know it in order to understand them.

The *corymbiferous* plants are thus in the class of the composites, and in the section of the discoids those which carry their seeds naked, that is to say, without pappuses or the filaments which crown them; such are Bidens, Wormwood, Tansy, etc. One will observe that the plants with demi-florets with naked seeds like Lapsana, Hyoseris, Catananche, etc. are nonetheless not called corymbiferous, because they are not numbered among the *discoids*.

COSSE [Pod]. Pericarp of leguminous fruits. The pod is ordinarily composed of two valvules, and sometimes only has one.

COSSON [New Shoot].[47] New shoot which grows on the vine after it has been pruned.

COTYLEDON [Cotyledon]. Small leaf or part of the embryo in which the nutritive juices of the new plant are developed and prepared.

The Cotyledons, also called the seminal leaves, are the first parts of the plant which appear outside the earth when it starts to grow. These first

leaves are very often of a different form than those which follow them and which are true leaves of the plant. Since usually the cotyledons do not take long to wither and fall shortly after the plant has come up and is receiving a more abundant nourishment by means of other parts than that which it would obtain from the substance of seed itself.

There are plants which have only one cotyledon, and for this reason are called monocotyledons, such as the palms, the lilies, the grasses and other plants, the largest number have two, and are called dicotyledons; if others have any more, they are called polycotyledons. The acotyledons are those which have no cotyledons, such as the ferns, the mosses, the mushrooms, and all the cryptogams.

These differences of germination furnished Ray, other Botanists, and in the last instance Messieurs de Jussieu and Haller the first or largest natural division of the vegetal realm.[48]

But in order to classify plants according to this method, it is necessary to examine them coming out of the earth, in their first germination, and even in the seed itself; which is often extremely difficult, especially for marine and aquatic plants. And for the trees and foreign or alpine plants which refuse to germinate and burst forth in our gardens.

CRUCIFERE ou CRUCIFORME [Cruciferous or Cruciform]. Arranged in the form of a cross. One gives the name crucifer especially to a family of plants whose character is to have flowers composed of four petals arranged in a cross, on a calyx composed of as many small leaves, and around the pistil six stamens, of which two, each the same height as the other, are shorter than the four others, and divide them equally.

CUPULES [Cups]. Kinds of small skullcaps or dishes which appear most often on several Lichens and Algae; and in their cavities one sees the seeds come into being and form themselves, especially in the genus formerly called liverwort, and today marchantia.[49]

CYMIE, ou CYMIER [Cyme]. A kind of umbel which is not at all regular, although all its rays [branches] depart from the same center; such are the flowers of the Guelder Rose, of Honeysuckle, etc.[50]

DEMI-FLEURON [Demi-Floret].[51] This is the name given by Tournefort, in the composite flowers, to the serrated florets which are ranged on the disk of lactucas and to those which form the circumference of the radiate flowers. Although these two kinds of half-florets have exactly the same form, and for this reason are confused under the same name by Botanists, they differ essentially nevertheless in that the first always have stamens and the others never have them. Like florets, demi-florets are always superior, and always carried by the seed which in its turn is carried by the disk or the receptacle of the flower. The demi-floret is formed of two parts, the infe-

rior one which is a very short tube or cylinder, and the superior which is flat, divided in strips, and to which the name is given (see *Fleuron, Fleur*).

DIECIE ou DIOECIE [Dioecious],[52] separate habitation. The name Dioecious is given to a class of plants composed of all those which carry their male flowers on one stalk, and the female flowers on another stalk.[53]

DIGITÉ [Digitate]. A leaf is digitate when its leaflets all depart from the summit of its petiole as from a common center. Such is, for example, the leaf of the Horse Chestnut.

DIOIQUES [Dioecious]. All the plants of the Dioecia are Dioecious.

DISQUE [Disk]. Intermediate body which holds the flower or some of its parts raised above the true receptacle.

Sometimes the disk is called the receptacle just as in the composites; then in that case the surface of the receptacle, or the disk, is distinguished from the circumference which surrounds it and which is called a ray.

The Disk is also a fleshy body which is found in several genera of plants, at the base of the calyx, beneath the embryo; sometimes the stamens are attached around this disk.[54]

DRAGEONS [Suckers]. Rooted branches attached to the foot of a tree, or its trunk, which cannot be uprooted without rupturing it.

ECAILLES ou PAILLETTES [Scales]. Small paleaceous strips which, implanted on the receptacle in several genera of composite flowers, distinguish and separate the florets; when the scales are simple threads, they are called hairs; but when they have some length, they take the name of scales.

It is only in the double-flowered Xeranthemum that the scales around the disk are elongated, take on color and the appearance of true demi-florets, to the point of deceiving at sight, anyone who does not look at them closely.

The name scales is frequently given to calyxes of catkins and cones: it is also given to small leaves of imbricated calyxes of flowers in a head, such as Thistles, Cornflowers, and to those having calyxes of a dry and scarious substance of Xeranthemum and Catananche.[55]

The stem of plants in some species is also loaded with scales: these are the tough rudiments of leaves which sometimes take their place, as in the Orobanche and Tussilago.

Finally the imbricated envelopes of the husks of several lilies are called scales,[56] as are the husks or flattened calyxes of the Schoenus and other grasses.

ECORCE [Cortex]. Covering or enveloping part of the trunk and branches of a tree. The bark is between the epidermis on the exterior and the *bast* on the interior; these three envelops are often combined in popular usage under the common name of bark.

EDULE, *Edulis* [Edible], good to eat.—This word is one of a number of those which it is desirable should pass from Latin into the universal language of Botany.

ENTRE-NŒUDS [Internodes]. In the culms of grasses these are the intervals which separate the nodes from which the leaves grow. There are some grasses, but only a very small number, whose naked culm from one end to the other is without nodes, and as a result without internodes, as, for example, the *Aira caerulea*.[57]

EPERON [Spur]. Protuberance in the form of a straight or curved cone, produced by the prolongation of the nectary in several kinds of flowers. Such are the spurs of Orchids, Toad-flaxes, Columbines, Larkspurs, several Geraniums and many other plants.

EPI [Ear or Spike]. Form of bouquet in which the flowers are attached around a common axis or receptacle formed by the extremity of the culm or the single stem.[58] When the flowers are pedicellate, assuming that all the pedicels are simple and attached immediately to the axis, the bouquet is always called a spike;[59] but in the spike rigorously understood, the flowers are sessile.

EPIDERME [Epidermis]. Is the thin exterior skin which surrounds the cortical layers; it is a very delicate membrane, transparent, ordinarily without color, elastic, and a bit porous.

ESPÈCE [Species]. Union of several varieties, or individuals, under a common characteristic which distinguishes them from all the other plants of the same genus.

ETAMINES [Stamens]. Masculine agents of fecundation; their form is ordinarily that of a filament which supports a head called an anther, or top. This anther is a kind of capsule which contains the prolific powder. This powder escapes either by explosion or by dilation and proceeds to find its way into the stigmas, in order to be carried to the ovaries which it fecundates. The stamens vary in form and number.

ETENDART [Standard]. Upper petal of leguminous flowers.

ENVELOPPE [Envelop].[60] Kind of calyx which contains several flowers, as in the lords and ladies, the Fig, the flowers with florets. Flowers equipped with an envelope are not for this reason deprived of a calyx.

FANE [Haulm or Involucre]. The haulm of a plant, is the collection of the lower leaves.

FÉCONDATION [Fecundation]. Natural operation whereby the stamens carry the principle of life necessary to the maturation of the seeds and their germination to the ovary by means of the pistil.

FEUILLES [Leaves]. Are the organs necessary to plants to pump moisture from the air during the night and to facilitate transpiration during the

day; they substitute in plants for the progressive and spontaneous movement of animals and in leaving plants open to agitation by the wind, also make them more robust.[61] Alpine plants battered constantly by wind and storms are always strong and vigorous; on the contrary, those raised in a garden have too calm an appearance, flourish less, and often languish and degenerate.

FILET [Filament]. Short stalk which supports the stamen. This name is also given to hairs that one sees on the surface of stems, leaves, and even the flowers of several plants.

FLEUR [Flower]—If I delivered my imagination up to the sweet sensation which this word calls up, I could write an article agreeable perhaps to Shepherds, but very bad for Botanists. Let us leave aside for a moment the vivid colors, the sweet odors, the elegant forms to search first to know well the organized being which brings them together. At first nothing seems simpler; who thinks he needs to be taught what a flower is? When no one asks me what time it is, I know it perfectly well, said Saint Augustine; I do not know it anymore when someone asks me what it is. One could say the same about the flower and perhaps about beauty itself, which, like the flower, is rapidly prey to time. In fact all the Botanists who have wanted to give up to now definitions of the flower have failed in this enterprise, and the most illustrious, such as Messieurs Linnaeus, Haller, and Adanson, who sensed the difficulties more than most, did not even attempt to surmount it and left the flower to be defined. The first gave us in his *Philosophia botanica* the definitions of Jungius, Ray, Tournefort, Pontedera, [and] Ludwig but without adopting any, and without proposing one of his own.[62]

Before him Pontedera recognized and exposed this difficulty quite well, but he could not resist the temptation to conquer it. The reader will soon be able to judge its success. Let us say now in what this difficulty consists, without nevertheless expecting that if I try in my turn to combat it, I will succeed better than has anyone up to now.

I am presented with a rose and am told: here is a flower. This is to show it to me, I confess, but that is not to define it, and this inspection will not be sufficient for me to determine for every other plant if what I see is or is not a flower; since there are a multitude of plants which have in none of their parts the visible color that Ray, Tournefort, [and] Jungius included in the definition of the flower, and which nevertheless bear flowers no less real than those of the rose bush, although much less conspicuous.

Generally the colored part of the flower, which is the corolla, is taken to be the flower, but one can easily be deceived; there are bracts and other organs just as and more colored than the flower itself and which do not form part of it, as we see in the bluebeard, in the Cow-wheat, in several Ama-

ranths and Chenopodium; there are multitudes of flowers which have no corolla at all, others which have it without color, so small and so barely apparent that only very careful investigation allows one to find it. When the wheat[63] is in flower, does one see colored petals there, in Mosses, in grasses? Does one see them in the catkins of the Walnut, of the Beech and of the Oak, in the Alder, in the Hazel, in the Pine, and in these multitudes of trees and herbs which have only flowers with stamens? These flowers however carry no less the name of flowers; the essence of the flower is thus not in the corolla.

It is no more located separately in any of the other constituent parts of the flower since there is not one of these parts that is not missing from some kinds of flowers. The calyx is absent, for example, from almost the entire Liliaceae family, and one would not say that a Tulip or a Lily is not a flower. If there are some parts more essential than others to a flower, these are certainly the pistil and the stamens. Now, in the entire family of cucurbitaceous plants and even in the whole class of monoecia, half of the flowers are without pistil, the other half without stamens, and this lack does not prevent them from being named and both kinds from being true flowers. Thus the essence of the flower consists neither separately in some of its so-called constituent parts, nor even in the totality of all these parts. In what then consists properly this essence; that is the question. This is the difficulty, and here is the solution whereby Pontedera tried to extricate himself from it.

The flower, he said, is a part of the plant different from the others by its nature and form, constantly adhering and useful to the embryo, if the flower has a pistil, and if there is no pistil, not holding onto an embryo.

This definition errs, it seems to me, in that it includes too much. For when the pistil is missing, the flower having no other characters than to differ from the other parts of the plant by its nature and its form, one will be able to give this name to the Bracts, the Stipules, the Nectary, the Thorns and to everything which is neither leaves nor branches. And when the corolla has fallen and the fruit approaches maturity, one could still give the name of flower to the calyx and the receptacle, even though there really is no longer any flower. If therefore this definition fits *all*, it does not fit *single cases*, and lacks thereby one of the two requisite principal conditions. It leaves a void in the mind, which is the greatest defect that a definition can have. For after having assigned the use of the flower to the profit of the embryo when it adheres to it, it makes that which does not adhere appear totally useless. And this conveys poorly the idea that the Botanist should have of the combination of the parts and their use in the working of the organic machine.[64]

I believe that the general deficiency arises from having considered the flower too much as an absolute substance, while it is not, it seems to me, but a collective and relative being, and having concentrated too much on ideas while it was necessary to limit oneself to that which presents itself naturally. According to this idea, the flower seems to me to be a transitory state of the parts of fructification during the fecundation of the germ; from this it follows that when all the parts of the fructification are gathered together, there will be only one flower.[65] When they are separated, there will be as many as there are parts essential to the fecundation; and as these essential parts number only two, namely, the pistil and the stamens, there will consequently only be two flowers, one male and the other female, which will be necessary to the fructification. One can nevertheless imagine a third which would reunite the sexes separated in the two others. But then if all these flowers were equally fertile, the third would render the two others superfluous, and could alone suffice to do the job, or rather there would really be two fecundations, and we examine here the flower in only one [of these fecundations].

The flower is thus only the focus and instrument of fecundation. One alone suffices when it is hermaphroditic. When it is either male or female there have to be two, namely one of each sex; and if one includes other parts, such as the calyx and the corolla in the composition of the flower this cannot be as essential parts, but only as nutritive and preservative of those which are essential. There are Flowers without calyx; there are those without corolla. There are even some without either; but there is not nor could there ever be any that would at the same time be without pistil and without stamens.

The Flower is a local and temporary part of the plant which precedes the fecundation of the seed, and in or through which it operates.

I will not elaborate to justify here all the terms of this definition which are perhaps not worth the trouble; I will only say that the word *precede* seems to me to be essential, because more often the corolla opens out and blooms before the anthers open in their turn, and in this case it is incontestable that the Flower exists prior to the work of fecundation. I add that this fecundation operates *in it* or *through it*, because in the male Flowers of androgynous and dioecious plants, no fructification is at work, and they are not less Flowers for this.

This, it seems to me, is the most correct notion of the Flower one can make, and the only one which does not leave itself open to objections which overturn all the other definitions people have attempted to give up to now. It is only necessary not to take too strictly the word *during* which I employed in my definition.[66] For even before the fecundation of the seed

has commenced, one can say that the Flower exists as soon as the sexual organs are in evidence, that is to say, as soon as the corolla is in full bloom, and normally the anthers do not open to the seminal powder as soon as the corolla opens to the anthers; however the fecundation cannot begin before the anthers are open. Nevertheless the work of fecundation often ends before the corolla withers and falls: for until this fall one can say that the Flower still exists. Thus it is necessary to give a bit of extension to the word *during* in order to be able to say that the Flower and the work of fecundation begin and end together.

Since the Flower generally makes itself noticed by its corolla, the part indeed more visible than the others due to the liveliness of its colors, it is also in this corolla that one mechanically assumes the essence of the Flower consists, and Botanists themselves are not always exempt from this small illusion; for often they employ the word Flower for the corolla, but these small inadvertant inaccuracies mean little when they do not change any of the ideas we have about things when we think about them. Hence the terms monopetalous Flowers, polypetalous, labiate Flowers, personate, regular Flowers, irregular, etc., which one frequently finds even in books of principles.[67] This small inaccuracy was not only forgivable, but almost forced upon Tournefort and his contemporaries, who did not yet have the word corolla, and the usage has since them been preserved by habit without great inconvenience. But it would not be permitted to me who notes this inaccuracy, to imitate it here; hence I return to the word Corolla to speak of its diverse forms and divisions.[68]

But I ought to speak here of the composite and simple Flowers, because it is the Flower itself and not the corolla which comprises it, as one is going to see after the exposition of the parts of the simple Flower.

One divides this Flower into the categories complete and incomplete. The complete Flower is that which contains all the parts essential to or contributing to the fructification, and these parts number four; two essential ones, namely, the pistil and the stamen, or the stamens; and two accessory or contributing, namely, the corolla and the calyx, to which one should add the disk or receptacle which bears the whole.

The Flower is complete when it is composed of all these parts; when one is lacking, it is incomplete. Now, the incomplete Flower can lack not only the corolla and the calyx, but even the pistil or stamens; and in this this last case, there is always another Flower, either on the same individual or on a different one, which bears the other essential part which this one lacks; from there the division into hermaphrodite Flowers, which can be complete or not, and into purely male or female Flowers which are always incomplete.

The incomplete hermaphrodite Flower is no less perfect for this, since it is self-sufficient in itself to perform the fecundation; but it cannot be called complete, since it lacks one of the parts of those thus called. A Rose, a Pink are, for example, perfect and complete Flowers, because they are provided with all these parts. But a Tulip, a Lily, are not complete Flowers, although perfect, because they have no calyx; similarly, the pretty little Flower called Paronychia is perfect as a hermaphrodite, but it is incomplete, because, despite its pleasant color, it lacks a corolla.

I could, without leaving the category of simple Flowers, speak here of regular Flowers and Flowers called irregular. But as this relates principally to the corolla, it is preferable to refer the reader to this word. There remain to be discussed the variations which this name simple Flower can admit.

Every Flower from which results a single fructification is a simple Flower. But if a single Flower yields several fruits, this Flower is called composite, and this plurality has never occurred in Flowers which had only one corolla. Hence every composite Flower necessarily has not only several petals, but also several corollas; and in order that the Flower be truly composite, and not a single aggregation of several simple Flowers, one of the parts of the fructification must be common to all the constituent florets and be missing from each of them individually.

I take, for example, a Flower of the Milk-thistle, seeing it full of several small florets and I ask myself if this is a composite Flower. In order to find this out, I examine all the parts of the fructification one after the other, and I find that each floret has stamens, a pistil, a corolla, but that there is only one sole receptacle in the form of a disk which receives them all; and that there is only one large calyx which surrounds them; from which I conclude that the Flower is composite, since two parts of the fructification, namely, the calyx and the receptacle are [respectively] common to all and are missing in each particular one.

I then take a Flower of the Scabious where I distinguish also several florets; I examine it in the same way, and I find that each of them is provided individually with all the parts of the fructification, without excepting the calyx and even the receptacle, since one can regard as such the second calyx which serves as the base for the seed. I conclude therefore that the Scabious is not a composite Flower, although it brings together like them [the composites] several florets on the same disk and in the same calyx.

As this is nevertheless subject to dispute, especially on account of the receptacle, we draw from the florets a more certain character, which suits all those which properly constitute a composite Flower and which suits only them; it is to have five stamens joined by their anthers in a tube or

cylinder around the style and divided by their five filaments at the base of the corolla; every Flower whose florets have their anthers thus arranged, is therefore a composite Flower, and every Flower in which one does not see any floret of this kind is not a composite Flower, and only improperly carries the name Flower even in the singular, since it is really an aggregation of several Flowers.

These partial florets which have their anthers thus joined, and whose assemblage forms a truly composite Flower are of two kinds; the ones which are regular and tubular are properly called florets, the others which are cut out and present at the top but one flat strip and [are] most frequently dentate, are called demi-florets; and from the combinations of these two types in the total Flower there result three principal kinds of composite Flowers, namely, those which are only provided with florets, and those which are provided only with demi-florets, and those which are mixed together.

The Flowers with florets or floretted Flowers are divided again into two kinds, relative to their exterior form; those which present a rounded shape like that of a head, and whose calyx approaches a hemispheric form, are called Flowers in a head, *Capitati*. These are, for example, *Thistles*, *Artichokes*, *Star-Thistle*.

Those whose receptacle is more flattened, such that their florets form with the calyx a more or less cylindrical shape, are called Flowers in a disk, *Discoidei*. *Santolina*, for example, and *Eupatorium*, display Flowers in a disk or discoid.

The Flowers with demi-florets are called demi-floretted and their external shape does not vary regularly enough to offer a division comparable to the preceding one. *Salsify*, *Scorzonera*, *Dandelion*, *Chicory* have demi-floretted Flowers.

With regard to mixed Flowers, the demi-florets do not mingle among the florets in confusion, without order, but the florets occupy the center of the disk, the demi-florets fill the circumference and form a crown for the Flower, and these Flowers thus crowned carry the name of *radiate Flowers*. *China Asters* and all *Asters*, *Marigold*, *Sunflowers*, *Jerusalem artichoke* all bear radiate Flowers.

In the composite Flowers, all these sections form still other divisions relative to the sex of the florets which will be discussed in the article *Fleuron*.

The simple Flowers have a different sort of variation from those which are called double or full Flowers.

The double Flower is the one of which one part is multiplied beyond its natural number, but without this multiplication harming the fecundation of the germ.

The Flowers rarely double themselves in the calyx, almost never in the stamens. The most common multiplication occurs in the corolla. The most frequent examples occur among the polypetalous Flowers, like Pinks, Anemones, Ranunculi; the monopetalous Flowers double less commonly. Nevertheless one fairly often sees Campanulas, Primroses, Auriculas, and especially Hyacinths with a double Flower.

This term double Flower does not indicate a simple duplication in the petals, but any multiplication whatsoever. Whether the petals are double, triple, quadruple, etc. so long as they do not multiply to the point of smothering the fructification, the Flower always retains the name double Flower; but when the excessively multiplied petals cause the stamens to disappear and abort the germ, then the Flower loses the name of double Flower and takes that of full Flower.

One sees from this that the double Flower is still in the order of nature, but that the full Flower is no longer and is but a veritable monster.

Although the most common fullness of Flowers manifests itself in the petals, there are nonetheless those which become full through the calyx, and we have a quite remarkable example in the Everlasting called *Xeranthemum*. This Flower, which appears radiate and which really is discoid, bears an imbricated calyx in the same way as the *Carlina*, whose interior row has its small leaves long and colored, and this Flower, although composite, doubles and multiplies so much through its brilliant small leaves that one takes them, filling the largest part of the disk, for so many demi-florets.

These false appearances often deceive the eyes of those who are not Botanists: but whoever is initiated into the intimate structure of Flowers cannot be deceived for a moment. A demi-floretted Flower externally resembles a polypetalous full Flower, but there is always this essential difference, that in the first each demi-floret is a perfect Flower which has its embryo, its pistil and its stamens; while in the full Flower each muliplied petal is always but a petal which carries none of the parts essential to fructification. Take the petals of a simple, double, or full Ranunuculus one after another, you will never find in any of them anything but the petal itself; but in the Dandelion each demi-floret furnished with a style surrounded by stamens, is not a simple petal, but a veritable Flower.

I am presented with a Flower of the yellow Water Lily, and asked if it is a composite or a double Flower? I respond that it is neither one nor the other. It is not a composite since the small leaves which surround it are not demi-florets; and it is not a double Flower, because duplication is not the natural state of any Flower and the natural state of the Flower of the yellow Water Lily is to have several series of petals around its embryo. Hence

this multiplicity does not prevent the yellow Water Lily from being a simple Flower.

The common constitution of the largest number Flowers is to be hermaphrodites; and this constitution seems in effect the most suitable to the vegetal realm, where the individuals deprived of all progressive and spontaneous movement cannot go looking for one another when the sexes are separate. In the trees and plants where they are separate, nature, who knows how to vary her methods, has provided for this obstacle: but it is no less true generally that these immobile beings ought, in order to perpetuate their species, to have in themselves all the instruments proper to this end.

FLEUR MUTILÉE [Disfigured Flower]. Is one which, usually as a result of a lack of warmth, loses or does not produce the corolla which it ought naturally to have. Although this disfigurement should never form a separate species, the plants in which it takes place nevertheless are distinguished in nomenclature from those of the same species which are complete, as one can see in several species of *Quamoclit*, *Campion Catchfly*, *Tussilago*, *Campanula*, etc.

FLEURETTE [Small Flower]. Small complete Flower which makes up part of the structure of an aggregate Flower.

FLEURON [Floret]. Small incomplete Flower which makes up part of the structure of a composite Flower. See *Fleur*.

Here is the natural structure of the constituent florets.

1. Monopetalous tubular corolla with five teeth, superior.
2. Elongated pistil, terminated by two reflexed stigmas.
3. Five stamens whose filaments are separated at the base, but forming by the adhesion of their anthers a tube around the pistil.
4. Naked elongated seed having for its base the common receptacle, and itself serving as the receptacle for the corolla by its top.
5. Pappus of hairs or scales crowning the seed, and forming a calyx at the base of the corolla. This pappus pushes the corolla up from below, detaches it, and causes it to fall when it is withered, and the enlarged seed approaches its maturity.

This common and general structure of florets admits exceptions in several genera of composites, and these differences even constitute sections which form so many branches in this numerous family.

Those of these differences which apply to the very structure of the florets, have been explicated above under the word *Fleur*. I now have to discuss those which relate to the fecundation.

The common nature of florets of which I am going to speak is to be hermaphrodites, and they fecundate by themselves. But there are others

which having stamens and having no germ, carry the name of males; others which have a germ and have no stamens, are called female florets; others which have neither germ nor stamens, or whose imperfect germ always aborts, carry the name of neuters.

These diverse kinds of florets are not indiscriminately intermingled in the composite Flowers; but their methodical and regular combinations are always relative either to the most certain fecundation, or to the most abundant fructification, or the fullest maturation of the seeds.[69]

FRUCTIFICATION [Fructification]. This word is always taken in a collective sense, and comprises not only the process of the fecundation of the germ and the maturation of the fruit, but also the assemblage of all the natural instruments devoted to this operation.[70]

FRUIT [Fruit]. End product of the vegetable growth [végétation] of the individual plant, containing the seeds which should renew it through other individuals. The seed is only this end product when it is alone and naked. When it is not, it is only a part of the fruit.

FRUIT [Fruit].[71] This word has in Botany a much broader sense than in ordinary usage. In trees and even in other plants, all the seeds or their coverings that are good to eat bear in general the name fruit. But in Botany this same name applies more generally still to all that results, after the flower, from the fecundation of the germ. Hence the fruit is properly none other than the fecundated ovary, and this, whether edible or not, whether the seed is already ripe or is not yet.

GENRE [Genus]. Collection of several species under a common character which distinguishes it from all other plants.

GERME, embrion, ovaire, fruit [Germ, embryo, ovary, fruit].[72] These terms are so close to being synonyms, that before discussing them in their articles, I believe I ought to unite them here.

The germ is the first rudiment of the new plant; it becomes an embryo or ovary at the moment of fecundation, and this same embryo becomes a fruit in ripening; here are the exact differences. But we do not always pay attention to the usage, and often use these words indiscriminately.

There are two kinds of quite distinct germs, one contained in the seed, which develops to become the plant, and the other contained in the flower, which by fecundation becomes the fruit. We see by what perpetual alternation each of these two germs produces itself and is produced from [the other].

We could also give the name germ to the rudiments of leaves enclosed in the leaf buds, and to those of flowers enclosed in the flower buds.

GERMINATION [Germination]. First development of the parts of the plant, contained in miniature in the germ.

GLANDES [Glands]. Organs which serve in the secretion of the juices of the plant.

GOUSSE [Pod]. Fruit of a leguminous plant. The pod, which is also called a legume, is usually composed of two panels called husks, flattened or convex, attached one on another by two longitudinal sutures and which enclose the seeds attached alternatingly at the suture to [the] two husks, which separate at maturity.

GRAPPE, *racemus* [Fruit cluster, raceme]. A kind of spike in which the Flowers are neither sessile nor completely attached to the stem, but to the partial pedicels into which the principal pedicels divide themselves. The raceme is nothing other than a panicle whose branches are more tightly packed, shorter, and often larger than in the panicle properly speaking.[73]

When the axis of a panicle or a spike bends downward rather than raising itself toward the Sky, we give it then the name cluster; such is the spike of the currant-bush, such is the cluster of the vine.[74]

GREFFE [Graft].[75] Operation by which the juices of a tree are forced to move through the vessels of another tree; from which it results that the vessels of these two plants not being of the same shape and dimensions, nor placed exactly opposite each other, the juices forced to refine themselves in dividing themselves, then yield better and more tasty fruits.

GREFFER [To Graft]. Is to implant the eye or the bud of a healthy branch of a tree in the bark of another tree, with the necessary precautions and in a favorable season, so that this bud receives the juice of a second tree and nourishes itself from it as it would have from the one from which it was detached. The name *Scion*[76] is given to the portion which attaches itself, and that of *Stock* to the tree to which it unites itself.

There are various ways to graft: grafting by approach, in a slit, in a crown, in a flute,[77] in shield.

GYMNOSPERME [Gymnosperm]. with naked seeds.

HAMPE [Scape]. Stalk without leaves destined only to hold the fructification elevated above the root.

INFERE, SUPERE [Inferior, Superior]. Although these words are purely Latin, one is obliged to employ them in French in the language of Botany, at the risk of being diffuse, loose, and ambiguous, in order to speak purely. The same necessity should be assumed and the same excuse repeated for all the Latin words I am forced to render into French. For this is what I will never do unless it is to say that I could not make it understood just as well in a more correct French.

There are in flowers two different arrangements of the calyx and the corolla, in relation to the germ whose expression comes up so often, that it

is absolutely necessary to create one word for them. When the calyx and the corolla are borne above the germ, the flower is called *superior*. When the germ is borne above the calyx and the corolla, the flower is called *inferior*. When one transports the word from the corolla to the germ, it is always necessary to assume the inverse. If the corolla is inferior, the germ is superior; if the corolla is superior, the germ is inferior; hence one has the choice of these two ways of expressing the same thing.

As there are many more plants where the flower is inferior, than those where it is superior, one should always assume the first case when the arrangement is not explained, because it is the most common; and if the description does not address the relative position of the corolla and the seed, it must be assumed to be an *inferior* corolla: for if it were *superior*, the author of the description would have expressly said so.

LÉGUME [Legume]. Kind of pericarp composed of two panels whose edges are united by two longitudinal sutures. The seeds are attached alternately to these two halves by the superior suture, the inferior is naked. In general we call by this name the fruit of leguminous plants.

LEGUMINEUSES [Leguminous Plants]. See *Fleurs*, *Plantes*.

LIBER [Bast, Phloem]. Is composed of pellicles which resemble the leaves of a book; it touches the wood directly. The Liber detaches itself every year from the two other parts of the cortex,[78] and unites with the sapwood, it produces on the circumference of the tree a new layer which increases the diameter.

LIGNEUX [Woody]. Which has the consistency of wood.

LILIACÉES [Liliaceae]. Flowers which have the character of the Lily.

LIMBE [Limb]. When a regular monopetalous corolla widens and enlarges at the top, the part which forms this widening is called the Lip, and ordinarily divides into four, five, or several segments. Various *Campanula*, *Primula*, *Bindweeds*, and other monopetalous flowers offer examples of this Limb, which is with regard to the corolla more or less that [which] is with regard to a bell the part which we call the pavillon. The varying degree of the angle which the Limb forms with the tube is what gives to the corolla the name infundibuliform, campaniform, or hypocrateriform.

LOBES [Lobes] of seeds are two joined bodies, flattened on one side, convex on the other.[79] They are distinct in the leguminous seeds.

LOBES [Lobes] of leaves.

LOGE [Chamber or Loculus]. Interior cavity of the fruit; it has several compartments when it is divided by partitions.

MAILLET [Mallet shoot]. Branch of the year that they leave to replant two stumps of old wood protruding from both sides.[80] This kind of cutting takes place only on the vine and [that] even fairly rarely.

MASQUE [Mask]. Mask[-like] flower is an irregular monopetalous Flower.

MONÉCIE ou MONOECIE [Monoecia]. Habitation common to the two sexes. One gives the name of Monoecia to a class of plants composed of all those which bear the male Flowers and the female Flowers on the same stalk.

MONOIQUE [Monoecious]. All the plants of the Monoecia are monoecious. We call monoecious Plants those whose Flowers are not hermaphrodites, but separately male and female on the same individual. This word, formed from that of monoecia comes from Greek and signifies here that the two sexes occupy the same lodging, but without inhabiting the same room. Cucumber, Melon, and all cucurbitaceae are monoecious plants.

MUFLE (Fleur en) [Face] (Flower like a). See *Masque*.

NŒUDS [Nodes]. Are the articulations of the stems and roots.

NOMENCLATURE [Nomenclature]. Art of joining to the names that we impose on plants the idea of their structure and classification.

NOYAU [Stone]. Bony seed which encloses an almond.

NUD [Naked]. Deprived of the attire normal to its kind. One calls naked seeds those which have no pericarp, naked umbels those which have no involucre, naked stems those which are not furnished with leaves, etc.

NUITS-DE-FER [Nights of Iron]. *Noctes ferrae*. These are, in Sweden, those whose cold temperature arrests the growth in several plants, producing their imperceptible perishing, their rotting, and finally their death. Their first effects prevent foreign plants from being returned to the glass houses which will perish by these kinds of chills.

ŒIL [Eye]. See *Ombilic*. Small cavity which is found in certain fruits at the extremity opposite the pedicel; in these inferior fruits these are the divisions of the calyx which form the eye, like the Quince, the Pear, the Apple, etc. in those which are superior, the ombilic is the scar left by the insertion of the pistil.

OEILLETONS [Young buds]. Buds which are on the sides of the roots of Artichokes and other plants, and which one detaches in order to propagate these plants.

OMBELLE [Umbel]. Arrangement of rays which coming from the same center, diverge like those of a parasol. The universal [compound] umbel borne on the stalk or on a branch, the partial umbel [that] emerges from a ray of the universal umbel.

OMBILIC [Eye]. This is, in berries and other soft and inferior fruits, the receptacle of the Flower which, after it has fallen, the scar remains on the fruit, as one can see in *Bilberries*. Often the calyx remains and crowns the Ombilic, which is thus commonly called [the] *eye*. Hence the eye of Pears

and Apples is nothing other than the ombilic around which the remaining calyx has dried out.

ONGLE [Nail]. Kind of mark on petals or on leaves, which often has the appearance of a nail and other different shapes, as one can see in the flowers of Poppies, Roses, Anemones, Rock Roses, and the leaves of Ranunculi, Persicariae, etc.

ONGLET [Claw]. A kind of hooked point by which the petal of some corollas is fixed on the calyx or on the receptacle: the claw of Pinks is longer than that of Roses.

OPPOSÉES [Opposites]. The opposite leaves number two, placed across from each other, on the two sides of the stem or the branches. The opposite leaves can be pedicellate[81] or sessile; if there are more than two leaves attached at the same height around the stem, then this plurality would negate the opposition and this positioning of the leaves would take a different name. See *Verticillées*.

OVAIRE [Ovary].[82] This is the name that one gives to the embryo of the fruit, or is the fruit itself prior to the fecundation. After the fecundation the ovary loses this name and is simply called fruit or in particular pericarp, if the plant is angiospermous; seed or grain,[83] if the plant is gymnospermous.

PALMÉE [Palmate]. A leaf is palmate when instead of being composed of several leaflets like the digitate leaf, it is cut only in several lobes directed in rays toward the summit of the petiole, but joining together before arriving there.

PANICULE [Panicle]. Branched and pyramidal spike. This shape results from the branches of the base being the *largest*, forming a larger space between them which diminishes in ascending, to the extent that these branches become *shorter*, fewer; in such a way that a perfectly regular panicle would finally terminate in a sessile flower.

PARASITES [Parasites]. Plants which are born or grow on other plants and nourish themselves from their substance. Cuscuta, Mistletoe, several Mosses, and Lichens are parasitic plants.

PARENCHIME [Parenchyme]. Pulpy substance or cellular tissue which forms the body of the leaf or petal: it is covered in both by an epidermis.

PARTIELLE [Partial]. See *Ombelle*.

PARTIES DE LA FRUCTIFICATION [Parts of the Fructification]. See *Etamines*, *Pistil*.

PAVILLON [Flag, Standard]. Synonym of standard.[84]

PÉDICULE [Pedicel].[85] Elongated Base which carries the fruit. One says *pedunculus* in Latin, but I believe that it is necessary to say pedicel in French. This is ancient usage, and there is no good reason to change it.

Pedunculus sounds better in Latin and it avoids the ambiguity of the name *pediculus*. But the word *pedicel* is clear and more sweet in French, and in the choice of words, it is proper to consult the ear and to consider the accent of the language.

The adjective *pedicellate* seems necessary to me in contrast with the other adjective *sessile*. Botany is so encumbered with terms, that one should not become too attached to making clear and concise those which are specifically dedicated to it.

The pedicel is the bond which attaches the flower or the fruit to the branch or the stalk. Its substance is normally more solid than that of the fruit which it bears on one of its ends, and less so than that of the wood to which it is attached by the other. Ordinarily when the fruit is ripe, it detaches itself and falls with its pedicel. But sometimes, and especially in the herbaceous plants, the fruit falls and the pedicel remains, as one can see in the genus *Rumex*. One can notice yet another peculiarity. That is pedicels which are all whorled around the stem, are also all jointed at their centers. It seems that in this case the fruit ought to detach itself at the joint, to fall with half of the pedicel and to leave only the other half attached to the plant. However that is not what happens. The fruit detaches itself and falls alone. The entire pedicel remains, and it is necessary for a precise action to sever the two at the point of articulation.

PERFOLIÉES [Perfoliates]. The perfoliate leaf is that which the branch pierces and which surrounds it on all sides.

PERIANTHE [Perianth]. Kind of calyx which directly touches the flower or the fruit.

PERRUQUE [Wig]. Name given by Vaillant to the roots adorned by a tufted beard of fibrils interlaced like tangled hair.

PÉTALE [Petal]. One gives the name petal to each whole piece of the corolla. When the corolla is but one single piece, there is also only one petal; the petal and the corolla thus form one and the same thing, and this kind of corolla is designated by the epithet monopetalous. When the corolla consists of several pieces, these pieces are so many petals, and the corolla which they make up is designated by their number drawn from the Greek, because the word petal also derives from it, and it is proper, when one wants to compose a word, to draw the two roots from the same language. Hence the words monopetalous, dipetalous, tripetalous, tetrapetalous, pentapetalous, and finally polypetalous indicate a corolla of one piece, or of two, of three, of four, of five, etc., finally of an indeterminate multitude of pieces.

PÉTALOIDE [Petalous]. Which has petals.[86] Hence the *petalous* Flower is the opposite of the *apetalous* Flower.

Sometimes this word enters as the second root in the composition of another word whose first root is a name of a number. Thus it signifies a monopetalous corolla deeply divided in as many sections as the first root indicates. Hence the tripetalous corolla is divided in three segments or half-petals, the pentapetalous in five, etc.

PÉTIOLE [Petiole]. Elongated base which bears the leaf. The word *petiole* is opposed to *sessile* with regard to leaves, as the word *pedicel* is to flowers and fruits. See *Pédicule*, *Sessile*.

PINNÉE [Pinnate]. A leaf winged by several rows [of leaflets] is called a pinnate leaf.

PISTIL [Pistil]. Female organ of the flower which surmounts the germ, and through which it [the germ] receives the fecundating intromission of the powder from the anthers: the pistil usually extends itself by one or several styles, sometimes also it is directly crowned by one or several stigmas, without any intermediate style. The stigma receives the pollen from the tip of the stamens, and transmits it via the pistil into the interior of the germ to fecundate the ovary. Following the sexual system, the fecundation of plants cannot operate except by the concourse of the two sexes, and the act of fructification is nothing more than that of generation. The filaments of the stamens are the spermatic vessels, the anthers are the testicles, the powder which they spread is the seminal fluid, the stigma becomes the vulva, the style is the [Fallopian] tube or the vagina, and the germ performs the role of uterus or womb.[87]

PLACENTA [Placenta]. Receptacle of the seeds. It is the body to which they are directly attached. M. Linnaeus does not accept this name *Placenta* and always uses that of receptacle. These words nevertheless denote very different ideas. The receptacle is the part by which the fruit adheres to the plant. The placenta is the part by which the seeds hold on to the pericarp. It is true that when the seeds are naked, there is no other placenta except the receptacle; but whenever the fruit is angiospermous, the receptacle and the placenta are different.

The partitions (*dissepimenta*) of all the capsules with several compartments are true placentas, and in the unicompartmental [capsules], there are often no placentas other than the pericarp.

PLANTE [Plant].[88] Vegetal production composed of two principal parts, namely the root by which it is attached to the earth or to another body from which it draws its nourishment, and the herb by which it inhales and exhales the element in which it lives.[89] Of all the known vegetals, the truffle is almost the only one which we can say is not a plant.[90]

PLANTES [Plants]. Plants [végétaux][91] disseminated on the surface of the earth to clothe and embellish it. There is no sight as sad as that of the

naked earth; there is none as smiling as that of mountains crowned with trees, rivers lined with thickets, plains carpeted with verdure, and valleys adorned with flowers.

One cannot deny that plants are organized and living bodies, which nourish themselves and grow by intussusception, and each of whose parts possesses in itself a vitality isolated and independent of the others, since they have the faculty of reproducing themselves.[92]

POILS ou SOYE [Hairs or Bristles]. Firm and more or less solid filaments which grow on certain parts of plants; they are square or cylidrical, upright or horizontal, forked or simple, pointed or hooked; and these diverse shapes are the fairly constant characters that serve for the classification of these plants. See the work of M. Guettard, entitled *Observations sur les plantes*.[93]

POLYGAMIE [Polygamy],[94] plurality of habitation.—A class of plants bearing the name Polygamy, and including all those which have hermaphrodite Flowers on a stalk and male or female Flowers of a single sex on another stalk.

This word Polygamy applies also to several orders of the class of composite Flowers, and in that case a somewhat different idea applies.

Composite Flowers can all be regarded as Polygams, since they all contain several florets which fructify separately, and each of which has as a result its own habitation, and, so to speak, its own descendents. All these separate habitations conjoin in different ways, and thereby form several kinds of combinations.

When all the florets of a composite Flower are hermaphroditic, the order they comprise bears the name equal Polygamy.

When all these constituent florets are not hermaphrodites, they form among themselves, so to speak, a bastard Polygamy, and this in several ways.

1st. *Superfluous polygamy*, when the florets of the disk being all hermaphrodites fructify, and the florets of the circumference being females also fructify.

2nd. *Useless polygamy*, when the florets of the disk being hermaphrodite fructify, and those of the circumference are neuter and do not fructify at all.

3rd. *Necessary polygamy*, when the florets of the disk being male and those of the circumference being female, they need each other in order to fructify.

4th. *Separated polygamy*, when the constituent florets are divided among themselves, either one to one or several together, enclosed by as many partial calyxes as in that of the entire flower.

One could imagine still other new combinations, supposing, for exam-

ple, male florets on the rim, and hermaphrodite or female flowers on the disk; but this never happens.

POUSSIÈRE PROLIFIQUE [Prolific Powder]. This is a multitude of small spherical bodies enclosed in each anther and which, when this opens and pours them into the stigma, open in their turn, imbue this same stigma with a humor which, penetrating through the pistil, proceeds to fecundate the embryo of the fruit.

PROVIN [Layered Vine]. Vine branch lying flat and bent in the earth. It produces *clusters of roots* by the nodes which are found buried. One then cuts the wood which adheres to the stock, and the opposite end which comes out of the earth becomes a new stock.

PULPE [Pulp]. Soft and fleshy substance of several fruits and roots.

RACINE [Root]. Part of the plant by which it is fastened to the earth or to a body which nourishes it. Plants thus attached by the root to their matrix cannot have local movement; feeling would be useless to them, since they cannot search for what suits them, nor flee what harms them: now nature does nothing in vain.

RADICALES [Radical]. Used for the leaves which are the nearest to the root: this word extends also to stems in the same sense.

RADICULE [Radicula]. Growing root.

RADIÉE [Radiate]. See *Fleur*.

RÉCEPTACLE [Receptacle]. That one of the parts of the flower and the fruit which serves as a seat for all the others and through which the nutritive juices of the plant which they ought to receive from it are transmitted to them.

It is most generally divided into the singular receptacle, which supports only one single flower and one single fruit, and which, as a result, belongs only to the most simple ones, and the shared receptacle which bears and accommodates several flowers.

When the flower is inferior, it is the same receptacle which carries the entire fructification. But when the flower is superior, the receptacle proper is double, and that which bears the flower is not the same as that which bears the fruit. This is agreed to be the most common meaning; but one can propose on this subject the following problem, in the solution of which nature has provided one of its most ingenious inventions.

When the flower is on the fruit, how can it be that the flower and the fruit nonetheless have but one and the same receptacle?

The common receptacle properly belongs only to the composite flowers, all of whose florets it bears and unites in one regular flower; such that the removal of some would cause the irregularity of all; but apart from the aggregated Flowers of which one can say approximately the same thing,

there are other sorts of common receptacles which still merit the name, as having the same function. Such are the *Umbel*, *Spike*, *Panicle*, *Thryse*, *Cyme*, *Spadix*, for which one will find articles each in its place.

RÉGULIÈRES (Fleurs) [Regular (Flowers)]. They are symmetrical in all their parts, like *Crucifers*, *Lilies*, etc.

RÉNIFORME [Reniform]. In the shape of a kidney.

ROSACÉE [Rosaceous]. Regular polypetal[ous flower] such as the Rose.

ROSETTE [Rosette]. Flower in rosette is a monopetalous Flower whose tube is nothing or very short and the limb very flattened.

SEMENCE [Seed]. Germ or simple rudiment of a new plant united with a substance proper to its conservation before it germinates, and which nourishes it during the early germination, until it can derive its nutrition directly from the earth.

SESSILE [Sessile]. This adjective denotes the absence of a receptacle. It indicates that the leaf, the flower, or the fruit to which one applies it directly attaches to the plant without the intervention of any petiole or pedicel.

SEXE [Sex]. This word had been extended to the vegetal realm and has become familiar there since the establishment of the sexual system.

SILIQUE [Siliqua]. Fruit composed of two valves held by two longitudinal sutures to which the seeds are attached on both sides.

The Siliqua is normally bilocular and divided by a partition to which is attached some part of the grains. Nevertheless this partition not being essential to it should not enter into its definition, as one can see in *Cleome*, *Chelidonium*, etc.

SOLITAIRE [Solitary]. A solitary flower is alone on its pedicel.

SOUS-ARBRISSEAU [Undershrub]. Woody plant or small bush smaller than a shrub, but which does not produce any flower or fruit buds in autumn. Such are *Thyme*, *Rosemary*, *Gooseberry*, *Heathers*, etc.

SOYES [Bristles]. See *Poils*.

SPADIX, ou RÉGIME [Spadix, or Fleshy Spike]. This is the floral branch in the Palm family; it is the true receptacle of the fructification, surrounded by a spathe which serves as its veil.

SPATHE [Spathe]. Kind of membraneous calyx which serves as an envelop for the flowers before their blossoming, and tears in order to open the passage to them at the onset of fecundation.

The Spathe is characteristic in the Palm family and that of the lilies.

SPIRALE [Spiral]. Line which makes several turns in moving away from the center or in approaching it.

STIGMATE [Stigma]. Summit of the pistil which becomes moist at the

moment of fecundation, in order that the prolific powder can attach itself to it.

STIPULE [Stipule]. Kind of leaflet or of scales which grows at the base of the petiole, pedicel, or branch. The Stipules are normally external to the part they accompany and serve them in some way as a support: but sometimes they also grow beside, across from, or even inside the angle of insertion.

M. Adanson says that there are no true stipules except those which are attached to stems, as in Bilberries, Apocynums,[95] Jujube trees, Spurges, Chestnut trees, Lindens, Mallows, Caper bushes: they take the place of leaves in plants which do not have them whorled. In the leguminous plants the position of the stipules varies. The Roses do not have true ones, but only a prolongation or appendix of [the] leaf or an extension of the petiole. There are also membraneous stipules, as in Corn Spurrey.

STYLE [Style]. Part of the pistil which holds the stigma raised above the germ.

SUC NOURRICIER [Nourishing Juice]. Part of the sap which is proper for nourishing the plant.

SUPERE [Superior]. See *Infere*.

SUPPORTS, *Fulcra* [Supports, Fulcra]. Ten kinds, that is to say, the stipule, bract, tendril, prickle, thorn, the pedicel, petiole, scape, gland, and scale.

SURGEON, *Surculus* [Sucker, *Surculus*]. Name given to young branches of the Carnation, etc. which one causes to take root by pressing them into the earth when they are still attached to the stem: this operation is a kind of *Layering*.

SYNONYMIE [Synoymy]. Concordance of various names given by different authors to the same plants.

Synonymy is not an idle and useless study.

TALON [Stub]. Small auricle which is found at the base of the leaves of Orange trees. It is also the place where the young bud is attached that one detaches from the foot of an Artichoke, and this place has a bit of root.

TERMINAL [Terminal]. [A] Terminal flower is that which comes at the summit of the stem or a branch.

TERNÉE [Ternate]. A ternate leaf is composed of three leaflets attached to the same petiole.

TÊTE [Head]. [A] Head or Capitate flower is an aggregate or composite Flower, whose florets are arranged spherically or approximately so.

THIRSE [Thyrsus]. Branched and cylindrical spike; this term is not used very much, because the examples are not frequent.

TIGE [Stem]. Trunk of the plant from which derive all its other parts

which are above the earth: it has a relationship with the midrib,[96] in that it is sometimes single and branches like it, for example in the Fern: it distinguishes itself also by the uniformity of its outline, it has neither front, nor back, nor definite sides, instead all this is found in the midrib.

Several plants have no stem, others merely have a naked stem without leaves, which for this reason [then is a] change [in the] name. See *Hampe*.

The stem ramifies in branches of different kinds.

Toque [Hat]. Cylindrical bonnet shape with a raised brim in the manner of a hat. The fruit of Paliurus has the form of a Hat.

Tracer [To Sucker].[97] To run horizontally between two soil layers, as does couch grass. Hence the word *Sucker* applies only to roots. When one thus says that the Strawberry plant runs out, one speaks incorrectly; it creeps, and that is another matter.

Trachées des plantes [Plant Tracheae]. Are, according to Malpighi, certain vessels formed by the spiral outlines of a thin strip, flat and fairly wide, which, thus rolling and winding in a corkscrew, forms a very narrow tube as if divided lengthwise into several cells, etc.[98]

Trainasse ou traîné [Meandering or Trained]. Long filaments which in certain plants creep on the earth, and which from place to place have joints from which they send forth into the earth the growing roots which produce new plants.

Tuniques [Tunics]. These are the concentric skins or envelopes of Onions.

Urne [Capsule].[99] Box or capsule full of powder which the majority of mosses in flower bear. The most common construction of these Capsules is to be raised above the plant by a pedicel more or less long, to carry at their summit a kind of pointed cap or hood which covers them, adhering at first to the Capsule, but which then detaches itself and falls when it is ready to open; to then open to two-thirds of their height, like a box of soap, by a cover that detaches itself and falls in its turn after the descent of the cap; to be doubly ciliate around its junction [with the cover], so that the humidity cannot penetrate into the interior of the Capsule as long as it is open; finally to lean and bend itself low at the approach of maturity in order to cast on the earth the powder which it contains.

The general opinion of Botanists on this matter, is that this Capsule and its pedicel is a stamen whose pedicel is the filament, whose Capsule is the anther, and whose powder which it contains and which it disseminates is the fecundating powder which is going to fecundate the female; as a result of this system one commonly gives the name anther to the capsule of which we speak. Nevertheless since the fructification of mosses is not yet completely known, and it is not absolutely certain that the anther of which

we speak is truly an anther, I believe that in waiting for better evidence, without pressing for the adoption of name so definitive that [only] the greatest enlightenment would subsequently force its abandonment, it is better to retain that of Urne given by Vaillant, and which, whatever the system one adopts, can remain without inconvenience.

UTRICULES [Utricles]. Kind of small water skins pierced by two tips, and communicating successively with each other by their openings like the aludels of a still. These vessels are normally full of sap. They occupy the open spaces or meshes which are found between the longitudinal fibers and the wood.

VÉGÉTAL [Vegetal].[100] Organized body endowed with life but deprived of feeling.

They will not permit me this definition, I know.[101] They want minerals to live, plants [végétaux] to feel, and even formless matter to be possessed of feeling. However this new physic may be, never have I been able, never will I speak according to the ideas of others, when these ideas are not my own.[102] I have often seen a dead tree which I previously saw full of life, but the death of a stone is an idea which would never enter my mind. I see an exquisite feeling in my dog, but I have never noticed any in a Cabbage. The paradoxes of Jean-Jacques are notorious. I dare to ask if he advanced any so crazy as that which I would have to combat if I entered here into this discussion, and which nevertheless shocks no one. But I stop and return to my subject.

Since plants [végétaux] are born and live, they decay and die; this is the irrevocable law to which all bodies are subject; as a result they reproduce: but how does this reproduction take place? In everything which is accessible to our senses in the vegetal realm, we see it take place by means of fructification, and we can presume that this law of nature is equally followed in the parts of the same realm whose organization escapes our eyes. I see neither flower nor fruits in *Byssus*, in *Conferva*, in the *Truffles*; but I see these plants [végétaux] perpetuate themselves, and the analogy on which I base myself in attributing the same means to others to tend to the same end; this analogy, I say, seems to me so certain, that I cannot refuse it my assent.[103]

It is true that the majority of plants have other ways of reproducing, such as by bulbs, by cuttings, by rooted branches. But these means are supplements rather than uniform principles; they are not at all common to all, there is only the fructification which is [common] and which not permitting any exception in those which are well known to us, never lets one suppose any in the other vegetal substances which are less [well-known].

VELU [Hairy]. Surface carpeted with hairs.

VERTICILLÉ [Whorled]. Circular attachment on the same level and in number greater than two around a common axis.

VIVACE [Perennial]. Which lives several years; trees, shrubs, undershrubs are all perennials. Even several herbs are perennials, but only through their roots. Hence Honeysuckle and Hop, are both perennial, in different ways. The first conserves its stems during the winter, so that they bud and flower the following spring, but the Hop loses its stems at the end of each Autumn and always begins each year by growing new ones from its stalk.

Plants transported out of their climate are subject to variation in this regard. Some plants that are perennials in hot countries become annuals among us, and this is not the sole alteration which they undergo in our gardens.

Hence the exotic Botany studied in Europe provides often very false observations.[104]

VRILLES, ou mains [Tendrils, or hands]. Kind of filaments which terminate the branches in certain plants, and furnish them the means to attach themselves to other bodies. The Tendrils are simple or branched; they take, being free, all sorts of directions, and when they cling to a foreign body, they embrace it in a spiral.

VULGAIRE [Common]. One normally designates thus the principal species of each genus longest-known from which it takes its name, and that was first considered a unique species.

Letters to Mme Madeleine-Catherine Delessert

The So-Called "Elementary Letters on Botany"

LETTER I

22 August [1771]

I omitted, dear Cousin, in my preceding letter,[105] to respond to the item of yours concerning plants, because that item alone demanded an entire letter which I could write you more at leisure.[106]

Your idea of amusing the vivacity of your daughter a little, and exercising it to [pay] attention to agreeable and varied subjects such as plants, seemed excellent to me; but I would not have dared to propose it for fear of playing the Monsieur Josse;[107] since it comes from you I approve it with all my heart and will concur in it likewise, persuaded that at any age, the study of nature dulls the taste for frivolous amusements, prevents the tumult of the passions, and brings to the soul[108] a nourishment which profits it by filling it with the most worthy object of its contemplations.

You have started by teaching the little one the names of as many plants as you have in common before you. That was exactly what it was necessary to do. The small number of plants she knows by sight are the components of comparison for expanding her knowledge. But they do not suffice. You ask me for a small catalogue of the most well-known plants with marks for recognizing them. There is a hindrance to doing this; it is that of giving you in writing these marks or characters in a clear and nevertheless economical manner. That seems to me impossible without employing the language of the thing, and the terms of this language form a separate vocabulary that you will not know how to understand if it is not first explained to you.

Besides, simply recognizing plants by sight and knowing only their names cannot but be too insipid a study for intellects such as yours, and it is to be presumed that your daughter would not be amused by it for long. I propose to you to note down several preliminary notions of vegetal structure and the organization of plants, in order that, should you take but a few steps into the most beautiful, the most rich of the three kingdoms of nature, you might walk there with at least some enlightenment. It is not a question therefore only of the nomenclature which is merely an herborist's

knowledge. I have always believed that one can be a very good botanist without knowing one plant by its name, and without wanting to make of your daughter a great botanist, I believe nonetheless that it will always be useful to her to learn to see what she sees well. Do not be dismayed by the rest of the enterprise. You will soon know that it is not much. There is nothing either complicated or difficult to follow in what I have to propose to you. It is only a question of having the patience to begin at the beginning. After that one advances only as far as one wants.

We are approaching the late season and the plants whose structure has the greatest simplicity are already past. Besides I ask that you take some time to bring a bit of order to your observations. But in waiting for Spring to put us in reach of beginning and following the course of nature, I am nevertheless going to give you a few words of vocabulary to remember.

A perfect plant is composed of root, stalk, branches, leaves, flowers, and fruits: for one calls fruit in botany, in herbs as well as in trees, the entire fabric of the seed. You know all this; at least sufficiently to understand the word; but there is a principal part which demands a closer examination. This is the fructification, that is to say, the flower and the fruit. Let us start with the flower, which comes first. It is in this part that nature has enclosed the summary of her work, it is by this that she perpetuates it, and it is also of all the parts of the vegetal usually the most striking, and always the least subject to variations.

Take a Lily.[109] I think you will find some still easily in full flower. Before it opens you see at the top of the stem an oblong greenish bud which turns white as it is ready to open; and when it is completely open, you see its white envelope take the form of a vessel divided into several segments. This enveloping and colored part, which is white in the Lily, is called *the Corolla* and not the flower as it is among the vulgar; because the flower is a composite of several parts of which the Corolla is only the principal one.

The Corolla of the Lily is not of one piece as it is easy to see. When it withers and falls, it falls in six well-separated pieces which are called the *Petals*. Thus the Corolla of the Lily is composed of Six petals. Every Corolla of a flower which is thus composed of several pieces is called a *polypetalous* Corolla. If the corolla consisted of one piece only, as for example in the convolvulus known as field bindweed, it would be called *monopetalous*.[110] Let us return to our Lily.

Inside the corolla you find precisely in the middle a kind of small column attached right at the bottom and which points directly upwards. This column taken in its entirety is called *the Pistil*; taken in its parts, it divides into three:

1st. its bulging base in cylinder but with three rounded angles all around. This base is called *the germ* or the *ovary*.
2nd. A thinner thread placed on the germ. This thread is called *the Style*.
3rd. The Style is crowned by a kind of capital with three indentations. This head is called *the Stigma*. This is what comprises the Pistil and its three parts.

Between the Pistil and the Corolla you find six other quite distinct bodies which are called *the Stamens*. Each stamen is composed of two parts, namely, a thinner one by which the stamen holds onto the bottom of the corolla and which is called the *filament*. A thicker one which attaches to the higher end of the filament and which is called the *Anther*. Each Anther is a box that opens when it is ripe and ejects a very fragrant yellow powder of which we will speak later. This powder up to now has no French name; botanists call it the *pollen*, a word which signifies powder.[111]

That is the rough analysis of the parts of the flower. As the Corolla withers and falls, the germ grows and becomes an elongated triangular capsule, whose interior contains the flat seeds distributed in three compartments. This capsule considered as the envelope of the seeds takes the name of *pericarp*. But I will not undertake here the analysis of the fruit, that will be the subject of another letter.

The parts I have just named to you are also found in the flowers of the majority of other plants, but in varying degrees of proportion, situation, and number.[112] It is by the analogy of the parts and by their various combinations that the various families of the Vegetal kingdom mark themselves. And these analogies of the parts of flowers are connected with other analogies of parts of the plant which seem to have no relation with them.[113] For example, this number of six stamens, sometimes only three, of six petals or divisions of the corolla and this triangular form with three compartments of the pericarp determines the entire family of the Liliaceae;[114] and in this entire family which is extremely numerous the roots are all more or less marked onions or *bulbs*, and varied according to their form or their composition. The onion of the Lily is composed of scales; in the asphodel it is like a bundle of elongated turnips, in the saffron, there are two bulbs one over the other, but [the roots of lilies are] always bulbs.[115]

The Lily which I have chosen because it is in season and also on account of the size of its flower and its parts which renders them more perceptible, lacks nevertheless one of the constitutive parts of the perfect flower, namely the Calyx.[116] *The Calyx* is this green part, usually divided into five leaflets, which supports and holds the corolla by its base, and which envelops it entirely prior to its blooming, as you will have been able to notice in the rose. The Calyx which accompanies almost all the other flowers is

missing from all the true Liliaceae, such as Tulip, Hyacinth, Narcissus, Tuberose, and even onion, leek, garlic, which are also true lilies, although they seem quite different at first glance. You will also see that throughout this same family the stalks are simple and slightly branched, the leaves whole and never pinked, observations which confirm in this family the analogy of the flower and the fruit with that of the other parts of the plant. If you follow these details with some attention, and make yourself familiar with them by frequent observations, you will already be able to determine by attentive and regular inspection of a plant whether it is or is not of the lily family, and this without knowing the name of this plant. You see that this is no longer a simple exercise of the memory, but a study of observations and of facts truly worthy of a naturalist. You will not start by telling all this to your daughter, and still less subsequently when you will be initiated into the mysteries of vegetation; but you will develop in her by degrees only what can suit her age and sex, in guiding her to find things by herself rather than by teaching them to her.

Good day, dear Cousin, if all this gibberish suits you, I am at your disposal. I await news of the little one.[117]

LETTER II

18 October 1771

Since you grasp so well, dear Cousin, the first lineaments of plants, although so slightly marked, that your discerning eye already knows how to distinguish a family resemblance in lilies, and that our dear small botanist already amuses herself with corollas and petals, I am going to propose to you another family on which she will be able once again to exercise her small knowledge; I admit nevertheless with a bit more difficulty, on account of the much smaller flowers, the more varied foliage; but with the same pleasure on her part and on yours; at least if you take as much pleasure in following this flowered route as I find in tracing it out for you.

When the first rays of spring have lighted your progress in showing you in the gardens Hyacinths, Tulips, Narcissus, Jonquils, and lilies-of-the-valley whose analysis is already known to you, other flowers will soon attract your attention and will demand from you a new examination. Such will be the Wallflowers or Blistercress; such will be the Rockets or Dame's Violets. To the extent that you will find them double, do not occupy yourself with their examination; they will be disfigured, or if you want, adorned according to our fashion, nature will not find herself in them anymore: she refuses to reproduce by monsters thus mutilated; because if the

most brilliant part, that is, the corolla, multiplies itself, it is at the expense of the most essential parts, which disappeared under this brilliance.[118]

Take then a simple Wallflower, and proceed to the analysis of its flower. You will first find there an exterior part which is missing in the Liliaceae, that is the Calyx. This Calyx has four pieces which should be properly called leaves or leaflets, since we have no proper word to designate them, like the word Petal for the pieces of the Corolla. These four pieces, ordinarily, are unequal two by two; that is to say, two leaflets opposed one to the other, equal to each other, smaller; and the two others, also equal to each other and opposed, larger, especially at the base where their roundness makes outside a fairly discernible protuberance.

Inside this Calyx you will find a corolla composed of four petals of which I leave aside the color, because it does not constitute [part of the] character.[119] Each of these petals is attached to the receptacle at the bottom of the Calyx by a narrow and pale part which people call *the claw*, and overwhelms the calyx by a wider and more colored part which is called *the Limb*.

In the center of the Corolla there is an elongated pistil, cylindrical or approximately so, terminated by a very short style, which is terminated itself by an oblong stigma, *bifid*, that is to say divided in two parts which are recurved on either side.

If you examine with care the respective position of the Calyx and the Corolla, you will see that each Petal instead of corresponding exactly to each leaflet of the Calyx is positioned on the contrary between the two, in such a way that it fits the opening which separates them and this alternating position occurs in all kinds of flowers which have an equal number of petals in the corolla and leaflets in the calyx.

It remains to us to speak of the stamens. You will find them in the wallflower numbering six as in the lilaceae, but not for all that equal among them or alternately unequal; since you will only see two, in opposition one to another, discernibly shorter than the four others which separate them and which are also separated two by two.

I will not enter here into the details of their structure and their position: but I forewarn you that if you look well you will find the reason why these two stamens are shorter than the others, and why two leaflets of the calyx are more protuberant, or to speak in botanical terms, more gibbous, and the two others flatter.

In order to complete the history of our Wallflower, we must not give up after having analyzed the flower, but must wait until the corolla withers and falls, which it will do fairly promptly, and to observe then what the pistil becomes, composed, as we said before, of the ovary or pericarp,

Style, and Stigma. The ovary elongates itself considerably and enlarges a bit to the degree to which the fruit ripens. When it is ripe, this ovary or fruit becomes a kind of flat pod called *siliqua*.

This siliqua is composed of two valves positioned one opposite the other and separated by a very thin partition called *septum*.

When the seed is completely ripe, the valves open from the bottom upward to allow it to pass, and remain attached to the Stigma by their superior part.

Hence one sees the flat and circular seeds mounted on the two sides of the septum, and if one looks with care at how they hold on one finds that it is by a short pedicel which attaches each seed alternately on the right and the left to the Sutures of the Septum, that is to say to its two sides by which it was as if stitched to the valves before their Separation.

I very much fear, dear Cousin, that I have fatigued you a bit with this long description; but it was necessary in order to give you the essential character of the numerous family of the Crucifers or flowers in the shape of a cross, which comprises an entire class in nearly all the Systems of Botanists; and this description, difficult to understand here without illustration will become clearer to you, I dare to hope, when you will Follow it with some attention having the object before your eyes.

The large number of species which comprise the Crucifer family has caused botanists to divide it in two sections which in respect of the flower are perfectly alike, but notably different with regard to the fruit.

The first section comprises the Crucifers with siliqua, like the wallflower of which I just spoke, Rocket, Watercress, Cabbages, rapes, turnips, mustard, etc.

The second section comprises the Crucifers with *silicula*, that is to say, whose siliqua is extremely short, almost as wide as long, and otherwise divided within; as among others Common cress, called *Field Pepperwort* or *Natou*,[120] Thlaspi called Taraspi by Gardeners, Cochlearia, Lunaria, which, even though the pod is quite large is nevertheless but a silicula, because its length barely exceeds its width. If you know neither Common cress, nor Cochlearia, nor Thlaspi, nor Lunaria, you at least know, I presume, Shepherd's purse, so common among the bad weeds in gardens. Well, Cousin, shepherd's purse is a crucifer with a silicle, whose silicle is triangular. On that one you can form an idea of the others, until you run across them.

It is time to let you breathe, all the more as this letter, before the weather lets you make use of it, will I hope be followed by several others, in which I will be able to add what of necessity remains to be said about the crucifers and which I have not said in this one. But it is good perhaps to forewarn you now that in this family and in many others you will find

often many flowers smaller than the wallflower and sometimes so small that one cannot examine their parts at all except by means of a magnifying glass, an instrument which no botanist can pass up, any more than a needle, and a pair of scissors for cutting. In thinking that your maternal zeal can lead you to that point I imagine to myself a charming tableau of my lovely Cousin with her glass eagerly plucking the piles of flowers a hundred times less flowered, less fresh, and less agreable than she. Good day, Cousin, until the next chapter.

LETTER III

16 May 1772

I suppose, dear Cousin, that you have indeed received my previous response even though you did not mention it in your second letter, and responding now to this one, I hope, concerning what you brought to my attention, that Mother well restored has departed for Switzerland in good health, and I count on you not to forget to give me news of the result and of the voyage and waters she is going to take. As Aunt Julie was to travel with her, I have charged M. Guyenet who is returning to the Val de Travers with the small herbarium which is intended for her and which I have sent to your address so that in her absence you can receive it and make use of it, if as long as there is something useful to you among these formless sprigs.[121] For the rest, I do not agree that you have rights to this mess. You have them over him who made it, the strongest and most dear that I know; but as for the herbarium, it was promised to your sister, when she herborized with me during our walks in the Croix de Vague, and that you cared for nothing less in this where my heart and my feet followed you with grandmother in Vaise. I blush to have kept my word to her so late and so badly; but finally over you she had my word and priority in that regard. For you, dear Cousin, if I do not promise you an herbarium from my hand it is in order to procure you a more precious one from the hand of your daughter, if you continue to follow with her this sweet and charming study which fills with interesting observations on nature the empty spaces of time which others devote to idleness or worse. For the present let us resume the interrupted thread of our vegetal families.

My intention is to describe for you then six of these families in order to familiarize you with the general structure of the characteristic parts of plants.[122] You already have two of them; there remain four which it is still necessary to have the patience to pursue. After which, leaving for a time the other branches of this numerous line and passing to the examination

of the different parts of the fructification we will proceed in a way that without, perhaps, knowing many plants you will at least never be in foreign country among the productions of the vegetal realm.

But I forewarn you that if you want to take books and follow the ordinary nomenclature, with many names you will have few ideas; those which you will have will become blurred, you will not follow well neither my progress nor that of others, and will have nothing more than a knowledge of words. Dear Cousin, I am jealous of being your sole guide in this subject. When it is time I will indicate to you the books which you can consult. In waiting have the patience to read only in this book of nature, and to stick to my letters.

The peas Are at present in full fructification. Let us seize this moment to observe their character. It is one of the most curious that botany offers. All flowers divide generally into regular and irregular. The first are those all of whose parts depart uniformly from the center of the flower and terminate therefore at their outer extremity in the circumference of a circle. This uniformity means that in presenting to the eye the flowers of this species, there is distinguished neither above nor below, neither right nor left; such are the two families examined above. But at first glance you will see that a pea flower is irregular, which one easily distinguishes in the corolla the longer part which ought to be above, the shorter [part] which ought to be below, and which one recognizes immediately in presenting the flower before the eye if one holds it in its natural position or if one inverts it. Hence when examining an irregular flower all the times one speaks of the top and the bottom it is in placing it in its natural position.

Since the flowers of this family are of a very particular construction, not only is it necessary to have several pea flowers and to dissect them successively to observe all their parts one after another, it is necessary even to follow the progress of the fructification from the first flowering until to the maturity of the fruit.

You will find then a *Monophyllous* Calyx, that is to say, of one sole piece terminated in five quite distinct points, of which two a bit broader are above and the three narrower ones below. This Calyx is bent toward the bottom, just as the pedicel which supports it, which pedicel is very slender, very mobile, such that the flower easily follows the current of the air and ordinarily presents its back to the rain.

The Calyx examined, one removes it by delicately tearing it in such a manner that the rest of the flower remains whole, and then you see clearly that the corolla is polypetalous.

Its first piece is a large and broad petal which covers the others and occupies the Superior part of the corolla, as a result of which this large petal

has taken [in French] the name of *pavillon*. People also call it *the standard*.[123] It would be necessary to block the eyes and the mind to not see that this petal is there like an umbrella to protect those [petals] it covers from the principal injuries from the air.

In lifting the standard as you have with the calyx, you will notice that it is boxed in from each side by an auricle in the lateral pieces, in such a way that its position cannot be disturbed by the wind.

The detached standard reveals these two lateral pieces to which it was attached by its auricles; these lateral pieces are called the *wings*. You will find in detaching them that joined even more strongly with that which remains they cannot be separated without some effort. Also the wings are not less useful to protect the sides of the flower than the standard is to cover it.

The detached wings let you see the last piece of the corolla, the piece which covers and guards the center of the flower, and surrounds it, especially at the bottom, as carefully as the three other petals surround the top and the sides. This last piece, which on account of its form people call the *carina* is like a strong coffer in which nature has placed its treasure in safety from the attacks of the air and the water.

After having thoroughly examined this petal, remove it gently by the bottom by pinching it lightly by the keel[124] that is to say by the thin grip which presents itself to you, for fear of removing with it that which it surrounds. I am certain that at the moment where this last petal[125] will be forced to let go and reveal the mystery which it conceals, you will not be able upon perceiving it to restrain yourself from giving a cry of Surprise and admiration.

The young fruit which the Carina surrounds is constructed in this manner. A cylindrical membrane terminated by ten quite distinct small threads encircles the ovary, that is to say the embryo of the pod. These ten small threads are so many stamens which reunite at the base around the germ and terminate at the top in just as many yellow anthers whose powder is going to fecundate the stigma which terminates the pistil, and which, even though yellow also from the fecundating powder which attaches to them, is distinguished easily from the stamens by its form and its size. Hence these ten stamens form even around the ovary a last cuirass to preserve it from injuries of the outside.

If you observe from very close, you will find that these ten stamens do not make at their base one body except in appearance. Since in the superior part of this cylinder there is a piece or stamen which first appears attached to the others, but which as the flower spreads open and the fruit grows detaches itself and leaves an opening above through which this growing fruit

can expand in half-opening and pushing away more and more the Cylinder which without this, compressing and strangling it all around, would prevent it from growing and prospering. If the flower is not sufficiently advanced you will not see this stamen detached from the Cylinder; but pass a litttle pin into two small holes that you will find near the receptacle at the base of this stamen and soon you will see the stamen with its anther follow the pin and detach itself from the nine others which will always continue to make together one sole body, until they wither and dry out when the fecund germ becomes a pod and has no more need of them.

This *pod* into which the ovary changes itself in ripening distinguishes itself from the *siliqua* of the crucifers, in that in the siliqua the seeds are attached alternately to two sutures, while instead in the pod they are attached on only one side, that is to say to only one of the two sutures, indeed holding alternately to two valves which comprise it, but always on the same side. You will grasp this difference perfectly, if you open at the same time the *pod* of a pea and the *siliqua* of a wallflower, paying attention to take neither the one nor the other at full maturity, so that after the opening of the fruit the seeds remain attached by their ligaments to their Sutures and their valves.

If I have made myself well understood, you will comprehend, dear Cousin, what surprising precautions have been accumulated by Nature to bring the embryo of the pea to maturity and to protect it especially in the midst of the greatest rains of humidity that are damaging to it, without however enclosing it in a hard case which would have made another sort of fruit. The Supreme Worker, attentive to the conservation of all the beings put a great deal of care into protecting the fructification of plants from the threats which could annihilate it, but he seems to have redoubled his attention for those which serve the nourishment of man and the animals like the majority of the legumes. The apparatus of the fructification of peas is, in various proportions, the same in this entire family. The flowers of this family bear the name *papilionaceae* because people thought to see there something similar to the shape of a butterfly:[126] They generally have a *standard*, two *wings*, a *carina*, which together make four irregular petals. But there are genera where the carina divides itself lengthwise into two pieces almost attached by the keel, and these flowers have really five petals. Others, like the red clover, have all their parts attached in one single piece, and even though papilionaceae do not need to be Monopetalous.

The papilionaceae or leguminoseae Are one of the most numerous and most useful families of plants. One finds there broad beans, Brooms, Lucernes, sweet vetches, lentils, Vetches, Wild Peas, beans, whose character is to have the carina twisted in [a] Spiral, which people took first to be

an accident. There are trees, among others the one commonly calls Acacia, and which is not the true Acacia. Indigo, licorice are in it also: but we will speak of all this more in detail later. Good day Cousin. I embrace all those you love.

LETTER IV

19 June 1772

. . .

I cannot understand why you have not received the herbarium. In the belief that my Aunt Julie had already departed I gave the packet to M. Guyenet to expedite it to you in passing through Dijon. I do not learn from any quarter that it has arrived either in your hands or in those of your sister, and I cannot imagine what has become of it.

Let us speak of plants while the season for observing them invites us to do so. Your solution to the question which I posed to you about the stamens of the crucifers is perfectly correct, and proves to me well that you have understood me or rather that you have listened to me, because you need only to listen in order to understand. You have made very good sense to me of the gibbosity of two leaflets of the calyx and the relative brevity of two stamens, in the wallflower, by the curvature of these two stamens. Nevertheless a step further would have led you to the first cause of this structure; For if you search still for why these two stamens are thus bent and consequently shortened, you will find a small gland implanted on the receptacle between the stamen and the germ, and it is this gland which, pushing away the stamen and forcing it to take the circumference, necessarily shortens it. There are on the same receptacle yet two other glands, one at the foot of each pair of long stamens; but since they do not at all push them toward the periphery they do not shorten them, because these glands are not, like the first two inside that is to say between the stamen and the germ; but outside that is to say between the pair of stamens and the calyx. Hence these four stamens supported and directed vertically in a straight line overwhelm those which are bent over and seem longer because they are straighter. These four glands, or at least their vestiges, are found more or less visibly in almost all the cruciferous flowers and in several are more distinct than in the wallflower. If you still ask: why these glands? I will answer that they are one of the instruments destined by nature to unite the vegetal realm to the animal realm and to cause them to circulate inside each other: But leaving these a bit too premature inquiries, let us return for the present to our families.

The flowers which I have described to you up to the present are all polypetalous. I should have begun perhaps with the regular monopetals whose Structure is much more simple: this great simplicity itself is what held me back. The regular monopetals constitute less a family than a great nation in which one counts several very distinct families; such that in order to comprehend them all under one common sign, it is necessary to employ characters so general and so vague that one appears to say something in saying in fact almost nothing at all. It is better to confine oneself to more narrow limits, but which one can assign with more precision.

Among the irregular monopetals, there is one family whose physiognomy is so marked that one distinguishes easily the members by their appearance. It is to this one that one gives the name of face flowers, because these flowers are split into two lips whose opening, whether natural or produced by a light pressure of the fingers, gives them the air of a gaping mouth. This family subdivides into two sections or lines, one of lipped flowers or *labiates*, the other of the mask flowers, in mask or *personates*: since the Latin word *persona* signifies a mask, a name certainly very suitable for the majority of people who bear among us that of *persons*. The character common to the entire family is not only to have the monopetalous corolla and as I said split into two lips or pendulous lips, one Upper one called *helmet*, the other lower called *beard*, but to have four stamens almost on the same level distinguished into two pairs the one longer and the other shorter. The inspection of the object will explain to you these characters better than can the discourse.

Let us then take the *labiates*. I will give you gladly as an example the Sage, which one finds in almost all gardens. But the peculiar and bizarre construction of Its stamens, which causes it to be removed by some botanists from among the labiates, even though nature seems to have inscribed it there, impels me to search for another example in the dead nettles and particularly in the species commonly called *white dead nettle*, but which botanists call rather *white lamium*, because it has no similarity to the nettle in Its fructification, even though it has much in its foliage. The white dead nettle, so common everywhere, remaining very long in flower, should not be difficult for you to find. Without stopping myself here at the elegant positioning of the flowers, I limit myself to their Structure. The white dead nettle bears a lipped monopetalous flower whose helmet is concave and bent over in the form of a vault to cover the rest of the flower and particularly its stamens all four of which hold themselves fairly close together under the shelter of its roof. You will discern easily the longer pair and shorter pair, and in the middle of the four the Style, of the same color, but which distinguishes itself in that it is simply forked at its extremity instead

of carrying an anther there as do the stamens. The beard, that is to say the lower lip, curls up and hangs down, and by this position allows one to see almost to the bottom the interior of the corolla. In the *Lamiums* this beard is divided lengthwise in its center, but this does not happen the same way to other labiates.

If you remove the corolla, you will remove with it the stamens, which hold on to it by their threads, and not to the receptacle, where the Style will alone remain attached. In examining how the stamens are attached to other flowers, one finds them generally attached to the corolla when it is monopetalous and to the receptacle or the calyx when the corolla is polypetalous: such that one can in this last case remove the petals without removing the stamens. From this observation one draws a nice, easy, and even fairly certain rule for knowing if a corolla is of one single piece or of several, when it is difficult, as it is sometimes, to assure oneself of it immediately.

The Corolla that has been removed remains pierced at its base, because it was attached to the receptacle, leaving a circular opening through which the pistil and what surrounds it penetrated inside the tube of the corolla. What surrounds this pistil in the lamium and in all the labiates are four embryos which become four naked seeds, that is to say without any envelope; such that these seeds, when they are ripe, detach themselves and fall to earth separately. This is the character of the Labiates.

The other line or section, which is that of the *personates* distinguishes itself from the labiates, first in its corolla whose two lips are ordinarily not open and gaping but closed and jointed, as you will be able to see in the garden flower called [in French] Mufflaude or *Snapdragon*,[127] or failing that in the Linaria, this spurred yellow flower so common at this season in the country. But a character more precise and more Certain is instead of having four naked seeds at the base of the Calyx like the labiates, the personates all have there a capsule which encloses the seeds and opens only at their maturity in order to disseminate them. I add to these characters that a large number of the labiates Are either scented and aromatic plants such as oregano, marjoram, Thyme, wild thyme, basil, Mint, hyssop, Lavender, etc., or scented and foul-smelling such as various species of dead nettles, Stachys, Ironworts, Horehound; some of them only such as bugle, self-heal, skullcap have no odor. While instead the personates are for the most part plants without odor such as Snapdragon, toad-flax, Eyebright, louse-wort, yellow rattle, broomrape, ivy-leaved toad-flax, round-leaved toad-flax, digitalis; I know hardly any scented plant in this branch except Scrophularia, which smells and stinks without being aromatic. I can cite for you here only plants which are truly not known to you, but which little by

little you will learn to know and whose family at least you will be able to determine by yourself upon encountering them. I would wish even that you attempt to determine the line or section by the physiognomy, and that you will exert yourself to judge by a simple glance of the eye if the lipped flower that you see is a labiate or a personate. The exterior form of the corolla can suffice to guide you in this choice, which you can later verify in removing the corolla and looking into the depth of the calyx; because if you have judged well, the flower which you will have named labiate will show you four naked seeds, and the one which you will have named personate will show you a pericarp: the contrary will prove to you that you are mistaken, and by a second examination of the same plant you will prevent a similar error for another time. Here, dear Cousin, is the occupation for several walks. I will not delay in preparing you for those which will follow.

You have not given me the address for which I asked you. Receive the most tender expressions of friendship of my wife and her Husband.

LETTER V

16 July [1772]

I thank you, dear Cousin, for the good news you have given me of your Mother. I hoped for the good effect of a change of air, and I awaited it no less from the waters and especially the austere diet prescribed during their use. I am touched by the memory of this good friend and I pray you to thank her on my behalf. But I absolutely do not want her to write me during her stay in Switzerland, and if she wants to give me her news directly, she has a good secretary with her who will acquit Herself quite well.[128] I am more charmed than surprised that she thrives in Switzerland; apart from the graces of her age, and Her lively and endearing gaiety, she has in her character a depth of sweetness and even-temperedness, of which I have sometimes seen her give to the grandmother the charming example that she has received from you. Your reflections on the vicissitudes of commerce are very fair and I hope that they are not occasioned by any experience that concerns you. If your sister settles in Switzerland you will each lose a great sweetness in life, and she especially, will lose advantages that are difficult to replace. But your poor Mother who [even] next door nevertheless felt her separation from you so acutely, how will she endure having her [Julie] at so great a distance? It is from you that she will draw her strength and her resources. You administer a precious good in softening in your sweet hands that good and strong stuff of your favorite, who, I do

not doubt, will become through your solicitudes as full of great qualities as charms. Oh Cousin, there is no happier mother than yours. The merit of her sons is certainly equally solid, as true as it is universally acknowledged. But it is still more rare to see thus three sisters share so much all kinds of perfections that it is easier to identify the one that dominates in each, than any which is missing from each of the three.

Do you know that I am beginning to be concerned about the small herbarium. I have no news of it from anywhere, although I have some from M. Guyenet since his return through his wife who does not herself tell me one word from him about this herbarium. I have requested news of it from him; I am awaiting his response. I am very afraid that not passing through Lyon he entrusted the packet to someone or other who knowing that it was dried herbs will have taken all of it for hay. Nevertheless if as I still hope, it finally makes it to your sister Julie or to you, you will find that I have not neglected to take some care with it. It is a loss which while small would not be easy for me to repair promptly, especially on account of a catalogue accompanied by various small clarifications written in the field, and of which I have not kept a duplicate.[129]

Comfort yourself, good Cousin, for not having seen the glands of the crucifers. Great, very observant Botanists have not seen them better. Tournefort himself makes no mention of them.[130] They are quite distinct in few genera, although one finds vestiges in almost all, and it is by dint of analyzing the flowers in cross-section and seeing there always the irregularities of the receptacle, that in examining them in detail, it has been found that these glands belonged to most genera, and that they are inferred by analogy in those even where they are not distinguished.

I understand that one is annoyed in taking so much trouble Without learning the names of the plants which one examines. But I assure you in good faith that it has not entered into my plan to spare you this small trouble. People pretend that botany is but a Science of words which exercises only the memory and teaches one only to name plants.[131] For me, I do not know any reasonable study which is merely a science of words; and to which of the two, I pray you, will I give the name of botanist, to the person who knows how to spit out a name or a phrase at the sight of a plant, without knowing anything of its structure, or to the person who, knowing this structure very well nonetheless ignores the very arbitrary names that people give to this plant in this or that country? If we give your children only an amusing occupation, we miss the best half of our aim which is, in amusing them, to exercise their intelligence and accustom them to paying attention. Before teaching them to learn to name what they see, let us begin by teaching them to see it. This science, forgotten in all educations,

ought to comprise the most important part of theirs. I will never repeat it often enough; teach them never to satisfy themselves with words, and to believe they know nothing of what has only entered their memory.

For the rest, in order not to be too difficult, even so I give you the name of the plants on which, in showing them to you, you can easily verify my descriptions. In reading the analysis of the labiates you did not have before your eyes a white dead-nettle, I presume; but you only have to send to the herborist around the corner to look for white dead-nettle freshly cut, apply to his flower my description, and then examining the other parts of the plant in the manner which we will subsequently discuss, you will know the white dead-nettle infinitely better than the herborist who furnished it will know it his entire life, still we will shortly find the way to do without the herborist: but it is first necessary to complete the examination of our families, thus I come to the fifth which in this moment is in full fructification.

Imagine to yourself a long, fairly straight stem, adorned alternately with leaves usually cut fairly finely, which enclose at their base the branches which stem from their axils. From the upper extremity of this stem radiate as from one center several pedicels or rays, which Spreading circularly and regularly like the ribs of a parasol, crown this stem in the form of a more or less open vase. Sometimes these rays leave an empty space in their middle, and resembling thus more exactly the hollow of the vase; sometimes also this center is furnished with other shorter rays, which climbing less obliquely adorn the vase and form together with the first the form approximately of a hemisphere whose convex part is turned upward.

Each of these rays or pedicels is terminated at its extremity, not yet by a flower, but by another set of smaller rays which crown each of the first exactly like the first crown the stem.

Here therefore are two similar and successive sets: the one of large rays which terminate the stalk, the other of similar, small rays which terminate each of the large ones.

The rays of the small parasols do not Subdivide themselves further, but each of them is the pedicel of a small flower of which we will speak in due course.

If you can imagine to yourself the idea of the form which I have just described to you, you will have that of the arrangement of the flowers in the family of the *umbellifers* or [in French] *Porte-parasol*;[132] because the Latin word *umbella* signifies a parasol.

Even though this regular arrangement of the fructification is striking and fairly constant in all the umbellifers, this is nevertheless not what constitutes the character of the family. This character derives from the very Structure of the flower, which it is now necessary to describe to you.

But it is appropriate, for greater clarity, to give you here a general distinction concerning the relative arrangement of the flower and the fruit in all plants, a distinction which greatly facilitates their methodical arrangement, whichever system one wishes to choose for this.[133]

There are plants, and these are the greatest number, for example the pink, whose ovary is obviously enclosed in the Corolla. We will give to these the name of *inferior flowers* because the petals embracing the ovary take their birth below it.

In other plants in a fairly large number, the ovary is found placed, not in the petals but below them; which you can see in the rose; because the hip which is the fruit is this green and swollen body which you see beneath the calyx, as a consequence also [is found] below the Corolla which in this manner crowns this ovary and does not envelop it. I will call these *Superior flowers*, because the corolla is above the fruit. One could make these words more French; But it seemed adavantageous to me to hold you always as close as possible to the terms admitted in botany so that Without needing to learn either Latin or Greek, you could nonetheless understand tolerably well the vocabulary of this science, pedantically drawn from these two languages, as if to know plants it was necessary to begin by being a learned grammarian.

Tournefort explained the same distinction in different terms: in the case of the *inferior* flower, he said that the pistil became the fruit: in the case of the *Superior* flower, he said that the calyx became the fruit. This manner of expressing oneself could be as clear, but it was certainly not as correct. However that may be, here is an occasion to practice when it will be time for your young pupils to learn how to disentangle the same ideas, rendered completely different by the terms.

I will tell you now that the umbelliferous plants have a *Superior* flower, or positioned on the fruit. The corolla of this flower has five petals called regular, even though often the two petals which Are turned inward in the flowers which border the umbel are larger than the three others.

The form of these petals varies according to the genus, but most often it is in the shape of a heart; the claw which grows over the ovary is very thin; the limb is broadened, its edge is *emarginate* (slightly notched), or rather it terminates in a point which folding itself at the top yet gives to the petal the appearance of being notched, although one sees it is pointed if it is unfolded.

Between each petal there is a stamen whose anther normally bordering the corolla makes the five stamens more visible than the five petals. I do not mention the calyx here because it is not distinct in the umbellifers.

From the center of the flower there emerge two styles adorned each by

their Stigma and fairly visible also, which after the fall of the petals and the stamens, remains in order to crown the fruit.

The most common form of this fruit is a somewhat elongated oval which in Its maturity opens itself in half, and divides into two naked seeds attached to the pedicel, which by an admirable device divides in two just like the fruit, and holds the seeds separately Suspended, until their fall.

All these proportions vary according to the genera, but here is the most common category. It is necessary, I admit it, to have a very attentive eye to distinguish well Without a magnifying glass such small objects; but they are so worthy of attention that one does not regret One's trouble.

Here then is the proper character of the family of umbellifers. Superior Corolla with five petals; five stamens; two Styles borne on a naked *dispermous* fruit, that is to say, *composed of two seeds* joined together.

Whenever you will find these characters united in one fructification, assume that the plant is an umbellifer, even when it has otherwise in its arrangement none of the order indicated above. And if you find that all this set of parasols matches my description, consider that you are mistaken If it is contradicted by the examination of the flower.

If it happened, for example, that in coming away from reading my letter you were to find in strolling along an Elder still in flower, I am almost certain that at first sight you would say; here is an umbellifer. In looking at it you would find large umbel, small umbel, small white flowers, superior corolla, five stamens: this is an umbellifer certainly: but let us see again: I take a flower.

First of all, instead of five petals, I find a corolla with five divisions it is true, but nevertheless of a single piece. Now the flowers of umbellifers are not monopetalous. Here clearly are five stamens, but I see no Styles, and I see more often three Stigmas than two, more Often three seeds than two. Now the umbellifers have neither more nor fewer than two Stigmas, neither more nor fewer than two seeds for each flower. Finally the fruit of the Elder is a soft berry, and that of the umbellifers is dry and naked. The elder is thus not an umbellifer.

If you retrace now your steps in looking more closely at the arrangement of the flowers, you will see that this arrangement is only in appearance that of the umbellifers. The large rays instead of emerging exactly from the same center, take their birth some higher, some lower; the small ones are born still less regularly: all this does not have the invariable order of umbellifers. The arrangement of the flowers of the elder is in a *corymb* or cluster rather than in an umbel. Here is how in sometimes deceiving ourselves we end by learning to see better.

The *Eryngo*, on the contrary, has hardly the appearance of an umbellifer,

and nevertheless it is one, since it has all the characters in Its fructification.[134] Where does one find, you ask me, the Eryngo? Throughout the countryside. All the big roads Are carpeted with it right and left: the first peasant can show it to you, and you will recognize it almost on your own by the bluish color or sea-green of Its leaves, by their sharp points, and by their consistency, smooth and leathery like parchment. But one can ignore such an unapproachable plant; it does not have enough beauties to make up for the wounds one gives oneself in examining it; and were it a hundred times prettier, my small Cousin with her small, sensitive fingers would soon be repelled from caressing a plant with such a bad disposition.

The family of umbellifers is numerous, and so natural,[135] that its genera are very difficult to distinguish: These are brothers whose great resemblance often causes them to be mistaken for each other. In order to assist Themselves in recognizing them people have imagined major distinctions which are sometimes useful, but on which it is necessary not to count too much either. The central point whence emerge the rays of the large as well as the small umbel is not always naked; it is sometimes surrounded by leaflets, like a ruffle. People give these leaflets the name of *involucre* (envelop). When the large umbel has a ruffle, one gives this ruffle the name of *large involucre*: One calls *small involucres* those which sometimes surround the small umbels. This gives rise to three sections of umbellifers.

1st. Those which have [a] large involucre and small involucres.

2nd. Those which have small involucres only.

3rd. Those which have neither large nor small involucres.

It would seem to lack a fourth division of those which have a large involucre and no small ones. But we do not know any genus which is consistently in this situation.

Your astonishing progress, dear Cousin, and your patience have so emboldened me that counting your trouble for nothing I have dared to describe to you the family of umbellifers without fixing your eyes on any model; which has rendered necessarily your attention much more fatiguing. Nevertheless I dare to doubt, reading as you know how to do, that after one or two readings of my letter an umbellifer in flower escapes your intellect in striking your eyes, and in this season you cannot miss finding several in the gardens and in the countryside.

The majority have white flowers. Such are the Carrot, the chervil, the parsley, the Hemlock, the angelica, the Cow-Parsnip, the Water-Parsnip, the burnet saxifrage, the Caraway or chanterelle,[136] the rock samphire etc.

Some like fennel, Dill, parsnip, have yellow flowers; there are a few with reddish flowers, and none of any other Color.

Here, you will tell me, is a nice general notion of umbellifers: but how

will all this vague knowledge keep me from confusing the Hemlock with Chervil or parsley, which you just named with it? The merest cook will Know the above more than us with all our learning. You are right. But nevertheless if we begin with observations of detail, soon overcome by number, the memory will abandon us, and we will lose ourselves from the first steps in this immense realm; instead if we begin by recognizing the big roads well we will wander rarely into the paths, and we will find our way everywhere without much trouble. Let us nonetheless make some exception for the utility of the object, and not expose ourselves, while analyzing the vegetal realm, to eating out of ignorance a Hemlock Omelet.

The small Hemlock in gardens is an umbellifer just like the parsley and the Chervil. It has the white flower like both of them, it is with the last in the section which has the small envelop and which does not have the large one; it resembles them sufficiently in its foliage so that it Is not easy to indicate to you in writing the differences. But here are characters sufficient in order for you not to be deceived.

It is necessary to begin by seeing in flower these diverse plants; because it is in this state that the Hemlock has Its proper character. It is to have under each small Umbel a small involucre composed of three small pointed leaflets, fairly long, and all three turned inward, while the leaflets of the small umbels of the chervil envelop it all around, and are turned equally from all sides. With regard to parsley, it scarcely has some short leaflets, thin like hairs, and distributed indiscriminately as much in the large umbel as the small ones which are all transparent and thin.

When you will have assured yourself well about the Hemlock in flower, you will confirm yourself in your judgment by lightly crushing and smelling its foliage, because its stinking and noxious odor will not let you confuse it with parsley or with chervil, both of which have agreeable odors. Of Course lastly not to mistake one for the other, you will examine these three plants together and Separately in all their states and by all their parts, especially the foliage, which accompanies them more constantly than the flower; and by this examination compared and repeated until you have acquired the certainty of a glance to know that you will arrive at imperturbably distinguishing and knowing the Hemlock. Study leads you thus to the door of practice, after which this makes for facility of knowledge.

Take breath, dear Cousin, for this is an excessive letter. I dare not even promise you more discretion in that which ought to follow it; but after this we will have before us a road bordered only by flowers. You deserve a crown for the sweetness and constancy with which you deign to follow me through these bushes without being repelled by their thorns.

LETTER VI

2 May 1773[137]

The preceding letter on herbaria should not be put in the order of composition, because it would interrupt the order which I have proposed for myself.

Although there remain, Dear Cousin, many things to be desired in the notions of our first five plant families, and I have not always known how to put my descriptions at the disposal of our small *Botanophile* (lover of botany), I believe nonetheless that I have given you a sufficient idea in order to be able, after some months of herborization to familiarize you with the general idea of the appearance of each family: such that at the sight of a plant, you could conjecture more or less if it belongs to one of the five families and to which one; except then to verify by analysis of the fructification if you are mistaken or not in your conjecture. The Umbellifers, for example threw you into some confusion but from which you can exit when you please by means of the indications that I have joined to the descriptions: For finally Carrots and Parsnips are such common things, that nothing is easier in the middle of summer than to have oneself be shown one or another in flower in a kitchen-garden. Now at the mere sight of the umbel and the plant which bears it one should get so clear an idea of umbellifers that upon encountering a plant of this family One will rarely be deceived at first glance. This is all I have aspired to up to this point; because there is no question so soon of genera and species; and again this is not a nomenclature of parrots that it is necessary to acquire, but a real science, and one of the most agreeable sciences that it is possible to cultivate. I pass therefore to our sixth family before taking a more methodical route. It could confuse you at first as much and more than the umbellifers. But my aim is merely at present to give you a general notion of it; especially since we have ample time before that of Its full flowering, and this time well employed will be able to smooth difficulties for you against which it is not yet necessary to struggle.

Take one of these small flowers which in this season carpet the pastures and which people call here *daisies*,[138] *little marguerites* or simply *marguerites*. Look at it well; for given its appearance, I am sure to Surprise you in telling you that this flower so small and dainty is really composed of two or three hundred other completely perfect flowers, that is to say, having each its corolla, its germ, its pistil, its stamens, Its seed, in a word as perfect in its kind as a flower of hyacinth or Lily. Each of these leaflets, white above, pink below, which form like a crown around the marguerite, and which seem to you no more than so many small petals are really so many

genuine flowers; and each of these small yellow pieces which you see in the center and which at first you took perhaps for nothing more than stamens are again so many true flowers. If you have already fingers skilled at botanical dissections, if you armed yourself with a good magnifying glass and much patience, I could convince you of this truth with your own eyes; but for the present it is necessary to begin, If you please, by taking me at my word, for fear of fatiguing your attention on the atoms. Nevertheless in order to put you at least on the track, remove one of the white leaflets from the crown, you will believe at first this leaflet flat from one end to the other, but look well at the end which was attached to the flower; you will see that this end is not flat, but round and hollow in the form of a tube and that from this tube emerges a small filament with two horns, this filament is the forked style of this flower, which as you see is not flat except at the top.

Look now at the yellow pieces which are in the middle of the flower and which I have told you are themselves so many flowers. If the flower is sufficiently advanced you will see several of them all around which are open in the middle and even cut in several parts. These are monopetalous corollas which Are opening, and in which the magnifying glass allows you to distinguish easily the pistil and even the anthers with which it is surrounded. Ordinarily the yellow florets that one sees in the center are still rounded and not pierced. These are flowers like the others, but which are not yet open, since they do not Open except successively, in advancing from the edge toward the center. Here is enough to show you by eye the possibility that all these pieces, white as well as yellow, are really so many perfect flowers, and it is a very constant fact. You see nevertheless that all these small flowers are pressed and enclosed in a Calyx which is common to them and which is that of the Marguerite. In considering the entire Marguerite as a single flower, we will therefore give it a very suitable name, that of calling it a *composite flower*. Now there is a large number of species and genera of flowers formed like the marguerite of an assemblage of other smaller flowers, contained in a common calyx. This is what constitutes the sixth family of which I have to speak to you, That is to say that of the *composite flowers*.

Let us begin by avoiding here the ambiguity of the word flower,[139] in restricting this name in the present family to the composite flower, and giving that of *florets* to the small flowers which make it up; but let us not forget that in the precise meaning of the word these florets themselves are so many true flowers.

You have seen in the Marguerite two sorts of florets, That is those of yellow color which fill the middle of the flower and the small white ligular

flowers[140] which surround them. The first are in their smallness fairly like in form to the flower of Lily-of-the-Valley or Hyacinth, and the second have some relation to the flowers of Honeysuckle. We will leave to the first the name of florets and to distinguish the others we will call them demi-florets: Since in fact they have rather the air of Monopetalous flowers which have been gnawed on one side leaving there only a strap which would scarcely make up one-half of the corolla.

These two sorts of florets combine themselves in the composite flowers in such a way as to divide the entire family into three quite distinct sections.

The first section is formed from those which are composed only of ligular flowers or demi-florets[141] in the middle as well as at the periphery, in the middle as well as at the circumference; they call them *demi-floret flowers* and the entire flower in this section is always of a single color, most often yellow. Such is the flower called Lion's Tooth or dandelion; such are the flowers of lettuce, chicory (this one is blue), scorzonera, salsify, etc.

The second section comprises the *floretted flowers*, that is to say those composed only of florets, all ordinarily also of one single color. Such are the flowers of everlastings, Burdock, Absinth, Artemisia, thistle, and of Artichoke which is a thistle itself of which people eat the Calyx and the receptacle still in bud, before the flower Is open or even formed. This down that people remove from the middle of the artichoke is nothing but the assemblage of florets which are beginning to form and which are separated from each other by the long hairs implanted on the receptacle.

The third section is that of the flowers which gather together the two types of florets. This is always made in such a way that the complete florets occupy the center of the flower, and the demi-florets form the rim or the circumference, as you have seen in the Daisy. The flowers of this section Are called *radiates*, botanists having given the name of *ray* to the circumference of a composite flower, when it is formed of ligular flowers or demi-florets. With regard to the area or the center of the flower occupied by the florets, people call it the *disk*, and they give also sometimes this same name of disk to the Surface of the receptacle where all the florets and the demi-florets are planted. In the radiate flowers the disk is often of one color and the ray of another, however there are also genera and species where both are of the same color.

Let us try for the present to fix well in your mind the idea of a *composite flower*. The common clover blossoms in this season; its flower is purple; If one falls into your hands, in seeing so many small flowers thus gathered together you might be tempted to take the whole for a composite flower. You would deceive yourself: in what? in that, in order to form a composite flower, an aggregation of several small flowers does not Suffice, but it is

necessary that more than one or two of the parts of the fructification be common to them, such that all have a share in the same one, and that none has its own separately. These two common parts are the Calyx and the receptacle. It is true that the flower of the clover or rather the group of flowers which appear to be but one seem at first sight to be borne on a sort of Calyx, but push away a bit this so-called calyx, and you will see that it is not attached at all to the flower, but that it is attached below it to the pedicel which bears it. Hence this apparent calyx is not one at all; it belongs to the foliage, and not to the flower; and this supposed flower is in fact but an assemblage of very small leguminous flowers, of which each has its own calyx, and which have absolutely nothing in common among them except their attachment to the same pedicel. The practice is nonetheless to take all this for a single flower; but it is a false idea, or if one absolutely wishes to regard as one flower a bouquet of this kind, it is at least not necessary to call it a *composite flower*, but an *aggregate flower*, or a head (*flos aggregatus*, *flos capitatus*, *capitulum*) and these designations are in fact sometimes employed in this sense by botanists.

Here, dear Cousin, is the simplest and most natural notion that I can give you of the family or rather the numerous class of Composites, and of the three sections or families in which they subdivide themselves. It is now necessary to speak to you of the structure of the fructification peculiar to this class, and this will lead us perhaps to determine its character with more precision.

The most essential part of a composite flower is the receptacle on which are planted first the florets and demi-florets, and then the seeds which succeed them. This receptacle which forms a disk of a certain extent comprises the center of the Calyx, as you can see in the Dandelion that we will take here as an example. The Calyx in this entire family is ordinarily divided almost down to the base in several pieces so that it can close up, open, and peel back, as happens in the course of the fructification, without causing it to tear. The Calyx of the dandelion is formed of two rows of leaflets inserted one inside another, and the leaflets of the exterior row which support the other curve and fold downward toward the pedicel, while the leaflets of the interior row remain upright to surround and contain the demi-florets which comprise the flower.

One form yet more common to calyxes of this Class is to be *imbricate*, that is to say formed of several rows of leaflets the one covering the junctions of the others [with the stem] like the tiles of a roof. Artichoke, Cornflower, Knapweed, the scorzonera offer you examples of imbricate calyxes.

The florets and demi-florets enclosed in the Calyx are planted very

densely on its disk or receptacle in staggered rows or like the squares of a Checkerboard. Sometimes they touch Each other naked With no intermediary, sometimes they are separated by the partitions of hairs or small scales which remain attached to the receptacle when the seeds have fallen. You are here on the way to observing the differences of Calyxes and receptacles; let us speak now of the Structure or the florets and demi-florets in beginning with the first.

A floret is a monopetalous flower, usually regular, whose corolla splits at the top into four or five parts. In this corolla are attached to its tube the five filaments of the stamens: these five filaments rejoin at the top in a small round tube which surrounds the pistil, and this tube is nothing but the five anthers or stamens reunited in a circle in one body. This reunion of the stamens forms in the eyes of Botanists the essential character of composite flowers, and belongs only to their florets, exclusive of all other sorts of flowers. Thus you will in vain find several flowers borne on the same disk as in the scabious and the Teasel; if the anthers do not reunite in a tube around the pistil and if the corolla is not carried On a single naked seed, these flowers are not florets and do not form a composite flower. On the contrary, when you find in a single flower the Anthers thus reunited in one body, and the superior corolla positioned on a single seed, this flower, even alone, would be a true floret, and would belong to the family of the composites, from which it would be better to draw therefore the character of a precise structure, rather than a deceiving appearance.

The Pistil bears a Style usually longer than the floret above which one sees it rise through the tube formed by the anthers. It terminates most often at the tip with a forked Stigma on which one sees easily two small horns. At its foot the pistil does not rest directly on the receptacle or on the floret, but each holds on by the germ which serves them as a base which grows and Elongates as the floret dries out, and finally becomes a rather long seed that remains attached to the receptacle until it is ripe. Then it drops if it is naked or the wind carries it far away if it is crowned with a tuft of plumes, and the receptacle remains to be unprotected, completely naked in some genera, or adorned with scales or hairs in others.

The structure of the demi-florets is like that of the florets; the stamens, the pistil, and the seed are arranged there about the same: only in the radiate flowers there are several genera where the demi-florets of the circumference are subject to aborting, either because they lack stamens or because they are sterile and do not have the capacity to fecundate the germ, thus the flower seeds only by the florets of the center.

In this entire Class of composites the seed is always *Sessile*, that is to say that it rests directly on the receptacle without any intermediate pedicel.

But there are seeds whose summit is crowned with a tuft that is sometimes sessile, and sometimes attached to the seed by a pedicel. You will understand that the purpose of this tuft is to disperse the seeds afar by giving the air more of an opportunity to carry them off and scatter them some distance.

To these rough and truncated descriptions, I should add that the calyxes have usually the property of opening Themselves when the flower Blooms, of closing when the florets wither and fall so as to contain the young seed and prevent it from scattering prior to its maturity, finally of reopening and completely peeling back to offer a larger area in their center to the seeds which grow larger in ripening. You should have often seen the Dandelion in this state, when children cut it to blow into its tufts which form a globe around the peeled-back calyx.

In order to know this Class well, it is necessary to follow the flowers from before their opening until the full maturity of the fruit, and it is in this succession that one sees metamorphoses and a chain of marvels which hold every healthy mind who observes them in a continual admiration. A flower that is convenient for these observations is that of the sunflower that one frequently encounters in vineyards and in gardens. The sunflower, as you see, is a radiate. The china aster which in autumn adorns flower beds is also one. The Thistles are floretted; I have already said that the scorzonera and the dandelion are half-floretted. All these flowers are large enough to be dissected and studied with the naked eye without fatiguing it too much.

I will not tell you any more today About the family or Class of the composites. I fear already having too much abused your patience with the details that I should have made clearer, if I had known how to make them shorter; but it was impossible for me to avoid the difficulty which is born of the smallness of objects. Good day, dear Cousin.

I cannot keep myself from communicating to you a doubt which came to me in rereading your last letter. Can it be that you have thus seen on your own the florets of the large Marguerite?[142] I confess that this amazes me. Despite your attention and your insight, you should have naturally taken the yellow points of the disk for so many stamens, and the white demi-florets of the circumference for so many petals. I beg you to tell me with the veracity that I expect of you if someone put you on the trail. If you have found this on your own, and if your small companion with her keen eyes saw it then, I predict to you boldly that in a few years you will both be, alone of your sex with Madame the Duchess of Portland among the very few true botanists, and that the covering of the earth will soon offer nothing foreign to your eyes.[143]

LETTER VII

Undated [late March/early April 1774][144]

I was waiting for your news, dear Cousin, without impatience, because M. Tessier[145] whom I saw since the receipt of your previous letter told me of having left your mother and your entire family in good health. I rejoiced in having confirmation of this by yourself, as well as the good and recent news you gave me of my Aunt Gonceru.[146] Her memory and her blessing opened with joy a heart that for a long time has scarcely experienced these sorts of feelings. It is through her that I still hold on to something precious on this earth, and to the extent that I preserve it, I will continue however one can to love life. This is the time to profit from your usual kindnesses toward her and me, it seems that my small offering takes on real value in passing through your hands. If your dear Husband soon comes to Paris as you make me hope, I will ask him to take charge of my annual tribute; but if he waits a bit I ask you to indicate to me to whom I should give it so that there will be no delay and you will not make the advance like last year, which I know you do with pleasure but to which I do not wish to consent without necessity.

Here, dear Cousin, are the names of the plants you have sent me in the last instance. I added a question mark to those of which I am in doubt, because you did not take care to place the leaves with the flower, and the foliage is often necessary to determine species for as shallow a botanist as myself. Upon arriving at Fourviére, you will find the majority of the fruit trees in flower, and I recall that you desired some directions on this subject. I cannot at this moment trace for you below more than some words very much in haste, being very pressed, so that you do not lose another season for this examination.

It is not necessary, dear friend, to give to botany an importance it does not have; it is a study of pure curiosity and which has no other real utility than that which a thinking and sensitive being can draw from the observation of nature and the marvels of the universe. Man has denatured many things in order to convert them better to his use, in that he is not at all to be blamed; but it is not less true that he has often disfigured them and that when in the works of his hands he believes he truly studies nature, he deceives himself. This error occurs especially in civil society; it likewise occurs in gardens. These double flowers that people admire in flower-beds are monsters deprived of the faculty of producing their like with which nature has endowed all organized beings. Fruit trees are more or less in the same state through the graft; you will in vain plant the pips of pear or apples of the best species, there will never grow from them anything but

wild stock. Hence, to know the pear and the apple of nature, it is necessary to look for them not in kitchen gardens but in forests. The flesh is not as large and as succulent, but the seeds ripen better, in multiplying more, and the trees are infinitely taller and more vigorous.[147] But I am raising a topic here which would lead too far; let us return to our kitchen gardens.

Our fruit trees, although grafted preserve in their fructification all the botanical characters which distinguish them, and it is through the attentive study of these characters, as well as through the transformations of the graft that one assures oneself that there is for example only one species of pear under a thousand different names by which the form and the flavor of their fruits have made them separated into so many purported species which are at bottom nothing but varieties. Moreover: the pear and the apple are but two species of the same genus, and their very characteristic unique difference is that the pedicel of the apple enters a recess in the fruit, and that of the pear attaches to a slightly elongated extension of the fruit. In the same way all the kinds of cherries, heart-cherries, morellos, bigaroons are but varieties of the same species;[148] all the plums are but one species of plum; the genus of the plum contains three principal species, that is the plum proper, the cherry, and the apricot which is also but a species of plum.[149] Hence when the learned Linnaeus, dividing the genus into its species denominated the *plum* plum, the plum cherry and the plum apricot, the ignorant made fun of him, but good observers admired the correctness of his reductions, etc. It is necessary to run, I make haste.

Fruit trees fall virtually all into a numerous family, whose character is easy to grasp, in that the stamens, in large number, instead of being attached to the receptacle are attached to the calyx, at the intervals which the petals have betweeen them; All their flowers are polypetalous and usually with five petals. These are the principal generic characters.

The genus of the Pear, which comprises also the apple and the Quince. Monophyllous calyx with five points. Corolla with five petals attached to the calyx, twenty stamens all attached to the Calyx. Germ or ovary inferior, that is to say below the corolla, five styles. Fleshy fruit with five compartments containing seeds, etc.

The genus of the plum which comprises the apricot, the Cherry and the Laurel-cherry. Calyx, corolla and Anthers about like the pear. But the germ is superior, that is to say in the corolla, and there is but one Style. Fruit more watery than fleshy containing one stone, etc.

The genus of the Almond which comprises also the peach. Almost like the plum, if it were not that the germ is hairy, and that the fruit, soft in the peach, dry in the Almond contains a hard stone, rough, sprinkled with cavities, etc.

All this is only roughly sketched, but it is enough to amuse you this year. Good day, dear Cousin.

Undated (1773 or 1774) annex to preceding letter

PLANTS IN THE LAST SHIPMENT

N° 11. *CENTAUREA JACEA.*

Brown Knapweed.

N° 12. *Campanula rotundifolia.*

Small campanula.

Linnaeus calls it round-leaved even though the leaves are long and narrow; but if you follow its long and thin stem right down to the root, you will find its two first leaves (called radical leaves) almost round.

N° 13. *Leontodon hirtum*?

Feather-brush or hairy dandelion?

What makes me hesitate is that the plant thus named has forked hairs, and that I have noticed on this one only simple ones. The leaves cannot decide the matter for me, because there are none.

N° 14. *Scabiosa arvensis.*[150]

You have named this scabious well, but it is not a composite flower, it is an aggregate flower. If you look well at its stamens, you will see four very distinct ones which are not united at their *tops*.

N° 15. *Medicago lupulina.*

Kind of small Lucerne [Alfalfa], called in Dauphiné *black clover*.

N° 16. *Campanula glomerata.*

This is the balled-up or conglomerated campanula which by chance has here only a single flower instead of the tuft which it usually bears.

N° 17. *Saponaria officinalis.*

This is the saponaria or soap-wort.

N° 18. *Daucus carotta.*

This is the wild Carrot of which I have sent you an umbel in a letter before.

N° 19. *Dactylis glomerata.*

Ask my Aunt Julie: it is a *grass*.

N° 20. *Holcus lanatus.*

Meadow soft-grass. Another grass.

N° 22. *Achillia millifolium.*

Milfoil [yarrow]. It is a composite.

N° 21. *Lotus corniculatus.*

Lotus or common bird's foot trefoil, on account of its form and its pods.

N.B. I have by oversight transposed these two numbers.

N° 23. *Galium verum.*

Yellow bedstraw [cheese rennet].

N° 24. *Galium molugo.*

White bedstraw [cheese rennet].

N° 25. *Melissa nepeta*?[151]

Calamint with the odor of Pennyroyal?

N° 26. *Heracleum sphondylium*?

Hogweed, or False-branch ursine?

N° 27. *Spiraea filipendula*?[152]

Filipendula? You will recognize it easily if it is; for in uprooting it in Autumn, one finds its root of grains like small *peas* attached by very loose threads.

N° 28. *Polygonum orientale.*

Prince's feathers. This plant is foreign, and you certainly did not find it in the countryside.

N° 29. *Antirrhinum linaria.*[153]

Linaria.

N° 30. *Borrago officinalis.*

Borage. How Cousin? Do you not know the borage?[154]

LETTER VIII[155]

11 April [1773] in great haste

Thank Heavens, dear cousin, you are well again. But it is not without your silence and that of M. Gaujet whom I had insistently asked to write me a word upon his arrival having caused me plenty of alarms. During this sort of distress nothing is more cruel than silence because it makes everything worse. But all that is already forgotten and I sense nothing more now than the pleasure of your return to health. The return of beautiful weather, the less sedentary life of Fourviére, and the pleasure of filling with the sweetest success as well as the most respectable of functions will soon strengthen it and you will feel less sadly the temporary absence of your Husband in the midst of the dear signs of his attachment and the continual cares your children demand of you.

You know that at this moment I also plan to ask you on my account the same cares that you have kindly taken in previous years to arrange to pass my Aunt the small tribute of my remembrance and my attachment. If your dear Husband comes promptly, I will ask him to take charge of this shipment; but as I am already late, If he is still late in coming I would like you to indicate to me here someone to whom I can remit this money in order

to send it to you as soon as possible, so that my good aunt not be kept waiting any longer.

The earth begins to turn green the trees to bud, The flowers to Blossom; there are already some over; one moment of delay for botany would put us behind an entire year: Hence I proceed to it without any other preamble.

I fear that we have treated botany thus far in too abstract a manner, in not applying our ideas to specifc objects. This is the error into which I have fallen principally with regard to the umbellifers. If I had begun by placing one before you I would have spared you a very fatiguing work on an imaginary object and myself the difficult descriptions which a simple glance would have done duty for. Unfortunately, at the distance where the law of necessity keeps me from you, I am not in a position to show you objects first-hand; but if we can both have some similar ones before our eyes, we will be able to understand each other very well in speaking of what we see. The entire difficulty is that it is necessary that the indication come from you; since to send you dry plants from here would do nothing. In order to recognize a plant well, it is necessary to begin by seeing it standing. Herbaria serve as reminders of those one already knows; but they make those one has not seen before difficult to recognize. It is therefore for you to send me the plant that you want to know and that you will have cut on the stalk; and it is for me to name them to you, to Classify them, to describe them; until by comparative ideas having become familiar to your eyes and your mind you arrive at Classifying, arranging, and naming yourself those that you will see for this first time. Science alone distinguishes the true botanist from the herborist or nomenclaturist. This means learning to prepare, dry, and preserve plants or samples of plants in a way to render them easy to recognize and determine. In a word, I propose that you begin an herbarium. Here is a great occupation which from a distance prepares itself for our small lover of botany: since at present and for some time still it will be necessary that the skill of your fingers make up for the weakness of hers.

There is first of all one provision to make: that is to say five or six quires[156] of gray paper and about as much white paper of the same size fairly strong and well made, without which the plants would rot in the gray paper or at least the flowers would lose their color, which is one of the features which makes them recognizable and which make an herbarium pleasant to see. It would moreover be desirable if you had a press of the size of your paper, or at least two pieces of board well joined, in such a way that in placing your leaves between them you could hold them pressed, by stones or other heavy bodies with which you weigh down the top board. These prepara-

tions made, here is what it is necessary to observe in order to prepare your plants in a way to conserve them and recognize them.

The moment to choose for this is the one when the plant is in full flower, and when even some flowers begin to fall in order to make room for the fruit which is beginning to appear. It is at this point when all the parts of the fructification are perceptible, that it is necessary to try to take the plant in order to dry it in this state.

The small plants can be taken completely whole with their root which one is careful to clean well with a brush so that no more soil remains. If the soil is damp one lets it dry in order to brush it or indeed washes the root, but it is necessary to pay the greatest attention to rinsing and drying it well before placing it between the papers, without which It will inevitably rot and will communicate its rot to the other neighboring plants. It is not necessary however to persist in conserving the roots unless they have some remarkable peculiarities; for in the greatest number, the ramified and fibrous roots have such similar forms that it is not worth the trouble to conserve them. Nature, which has done so much for elegance and ornament in the form and the color of plants in what strikes the eyes, has destined the roots exclusively to useful functions, since being hidden in the earth giving them a pleasing structure would have been to hide the light under the bushel.

Trees and all the large plants can be taken only by samples. But it is necessary that this sample be so well chosen that it contains all the constitutive parts of the genus and the species, so that it can suffice for recognizing and determining the plant which furnished it. It does not suffice that all the parts of the fructification be perceptible which serves only to distinguish the genus; it is necessary that one sees well the character of the foliation and of the ramification; that is to say, the birth and the form of the leaves and the branches, and even as much as possible some portion of the stem; for as you will see in the following; all this serves to distinguish the different species of the same genus which are perfectly alike in flower and fruit. If the branches are too thick one thins them down with a knife or penknife in adroitly reducing underneath their thickness as much as possible without cutting and mutilating the leaves. There are botanists who have the patience to slit the bark of the branch and from it draw out adroitly the wood, in such a way that the rejoined bark seems to show you the whole branch even though the wood is no longer there. By means of which one does not have between the papers too considerable thicknesses or protuberances that spoil and disfigure the herbarium and give a bad form to the plants. In the plants where the flowers and the leaves do not arrive at the same time, or originate too far from each other one takes a small branch in

flower and a small branch with leaves and places them together on the same paper thus one offers to the eye the various parts of the same plant, sufficient in order to make it recognizable. With regard to plants where one finds only leaves and whose flower has not yet arrived or which is already past, it is necessary to leave them, and to wait in order to recognize them until they show their visage. A plant is no more surely recognizable by its foliage than a man by his clothing.

Such is the choice that it is necessary to put into what one cuts. It is also necessary to put some also into the moment one takes for this. The plants cut in the morning at dawn, or in the evening in the dampness, or in the daytime, during the rain do not last. It is absolutely necessary to choose dry weather, and even in that weather the driest moment and the hottest of the day, which is in summer between eleven o'clock in the morning and five or six o'clock in the evening. Even then if one finds there the least dampness one must leave them; for inevitably they will not last.

When you have cut your samples you bring them home always very dry in order to place and arrange them on your papers. For this you make your first layer of two sheets at least of gray paper on which you place one sheet of white paper, and on this sheet you arrange your plant, taking great care that all its parts, especially the leaves and the flowers are wide open and spread out in their natural position. The somewhat withered plant, but without being too much so, usually lends itself better to the arrangement that one gives it on the paper with the thumb and fingers. But there are rebels which curl up on one side while one is arranging them on the other. In order to prevent this inconvenience I have weights, large coins, farthings with which I make steady the parts I have just arranged, while I arrange the others, so that when I have finished, my plant finds itself almost completely covered with these pieces which hold it in place. After this one places a second white sheet on the first and one presses it with the hand in order to hold the plant constrained in the position one has given it, advancing thus the left hand which presses as one withdraws with the right the weights or large coins which are between the papers; one then places two other sheets of gray paper on the second white sheet without ceasing for a moment to hold the constrained plant, for fear that it not lose the position that one has given it; on this gray paper one places another white sheet, on this sheet a plant that one arranges and covers as above, until one has placed the entire harvest one has brought back, and which ought not to be numerous for each time; as much to avoid the length of the task, as for fear that during the drying of the plants the paper not take up some dampness from their large number; which would inevitably spoil your plants if you do not hasten to change the paper with the same atten-

tion; and this is even what it is necessary to do from time to time until they have fully taken their shape and are completely dry.

Your pile of plants and papers thus arranged ought to be put in the press, without which the plants would curl up; there are some that wish to be more pressed, others less; experience will teach you this, in the same way changing their paper at the right time and also often as necessary, without giving you a useless task. Finally when your plants are completely dry, you will place them very neatly each on a sheet of paper, one on top of the other without having need of intermediate papers; and you will have thus begun an herbarium which Will grow without ceasing with your knowledge, and will finally contain the history of all the vegetation of the country; For the rest it is always necessary to keep this herbarium well closed and a bit pressed; without which the plants however dry they are will attract the humidity of the air and will curl up again.

Here now is the use of all this work to arrive at the particular knowledge of plants and to allow us to understand each other well when we speak about it.

It is necessary to cut two samples of each plant; the larger one to keep, the other smaller to send to me. You will number them with care so that the large and the small sample of each species have always the same number. When you will have one or two dozen species thus dried you will send them to me in a small book at some point. I will send you the name and the description of the same plants, by means of the numbers you will recognize them in your herbarium, and from there on the ground, where I expect that you will have begun to examine them well. Here is a sure way to make progress as certain and as rapidly as possible far from your guide.

You will not be able to read this paper, I fear; for myself I do not have the time to reread it; it is lacking for me and I finish. Good day, cousin.

Many greetings, I beg you, to Monsieur De Lessert, to the dear Mother, to the whole family. My compliments to M. Gaujet. My wife embraces you with all her heart.

NB.— I forgot to tell you that the same papers can serve several times so long as one has taken care to let them air out well and dry beforehand. I ought to add also that the herbarium ought to be kept in the driest place of the house, and on the first rather than on the ground floor.

Since my letter was written I just received the visit of Monsieur de Lessert. I mean to apprise you neither of his arrival nor of the pleasure this agreeable surprise gave me. But I can tell you at least that he seemed not at all fatigued by the voyage and that I have never seen him either so fat or looking so well.

Further Letters to Mme Delessert

24 May 1773

I swear to you, delightful Cousin, that I am enraptured by your last letter, and by the charming small sample of an herbarium that you joined to it; But especially by four words you said to me concerning number 4.[157] What, you knew to see by yourself that these yellow points which fill the middle of the flower are so many flowers themselves! You have found without me what I scarcely dared to tell you, fearing to fatigue your sight too much and to overload your attention. You will understand better perhaps how much you surprised me, when you see in the enclosed letter which was already written with what fear, with what circumspection I dared to have you make out, in the small Marguerite, what you yourself have already seen in the big one. Oh! since you take this step, I will not spare you so much anymore, and in order to follow you I will soon perhaps have more need to consult my own strength than yours. Here is the letter that I wrote you on the composite flowers, and you are happy that it was done in advance, because if it was still to do I would well have a different trust, and your attention would not be won at such a low price.

Your plants are perfectly well conserved, the colors especially, which was difficult for the blue flower, but you did not also take care to dry the leaves, which, when the genus is known, serve to determine the species. I hesitated on number 1. which has no more than three petals and which has no leaves at all. Number 3 does not have them either, and it was necessary at least to leave the pedicel longer, because it serves to distinguish two species of ranunculus very similar otherwise, but one of which has the pedicel furrowed by four or five striations, while the other which is yours, has the pedicel without striation and absolutely round.[158] But it is not necessary here to censure you too severely, because I am very pleased with you. Here then are your plants, with a French name and the Latin name of Linnaeus; I advise you to keep careful note of the Latin names and to try even to remember them; because this is the only way to get on with botanists, and to indicate to them with certainly the plant of which one speaks Without recourse to long descriptions.

N° 1. *SAXIFRAGE GRANULATA, Linn.*

White saxifrage. This plant is of the rose family[159] of which we have not

yet spoken. It has a Calyx cut in five parts, five elongated petals, ten stamens, The forked pistil terminated by two stigmas; the ovary in maturing forms a capsule with two horns between which it opens Itself in order to expel its grains in their maturity. These grains are blackish and very slender. Its leaves are rounded with some serrations. Its root is surrounded by small reddish tubercles, which are called in the vernacular grain or seed of saxifrage.

N° 2. *VERONICA CHAMAEDRYS, Linn.*

Germander speedwell. This is a speedwell, as you have very well conjectured, but it is not the wild speedwell; it is even less the *forget-me-not* which is a rose[160] and therefore polypetalous.

All the speedwells are irregular monopetalous flowers slit in four parts, of which one is always smaller or larger than the others. They have only two stamens. The ovary becomes a flattened capsule in the shape of a heart: this capsule has two compartments which contain the grains, larger and whiter than those of the saxifrage.

They give the name Germander to this species because its leaves approach in form those of the germander or *small oak*. Here is a sure indication by which you will be able to distinguish it from every other speedwell: it is that it has two rows of hairs along its stem, fairly long and close, which form two lines up to a tier of branches, and from this tier up to the following extend two other similar lines of hairs, which intersect the first. You will scarcely have the plant before you than you will understand what I want to tell you, and it is a very simple observation which has not been made yet by any botanist.

N° 3. *RANUNCULUS ACRIS, Linn.*

Buttercup. Rose family, genus ranunculus.[161] A character peculiar to Ranunculi, is that they all have on the claw of their petals a kind of small shell or sac or *nectary*, as botanists generally say, and this character Suffices alone to distinguish them from Anemones, Clematis, and from the other roses, which like these have many stamens and many ovaries. It is necessary to guard against confusing this species with another creeping ranunculus, which resembles it closely and which is even more common, they call it here the *Field buttercup*. The field buttercup has, as I have told you, the pedicel with fluted fowers, while that of the buttercup is thinner and completely round.

N° 4. *CHRYSANTHEMUM LEUCANTHEMUM, Linn.*

Large Marguerite.[162] When you have read the enclosed letter and have been introduced to the Class of the composites, you will not need me to tell you that here is a radiate flower. I will tell you only that the genus of the large Marguerite distinguishes itself easily from that of the small Mar-

guerite by its calyx, and from all the other radiates; For besides its calyx being almost absolutely flat when the flower is well spread out, The leaflets of this calyx all have a membraneous and blackish border by which it is very easy to recognize it. With regard to the species, it is not to be feared that you would confuse it with the other species which are not so common. There is only one other large Marguerite which is found often among wheat; but apart from its leaves being more narrow and more bluish than those of n°. 4 it is still easier to distinguish by the color of its flower, which is all yellow and gilded as much in the circumference as in the disk, while n°. 4 always has yellow florets and white demi-florets. One can call the yellow, *large wild Marguerite*, and this one (n°. 4), the *large field Marguerite*, because it is more common there, even though it is also found in the countryside; but I do not believe that the yellow one is never found in fields.

Here are, dear Cousin, instructions Sufficient to enable you to recognize, name, and classify your four plants, until you have the use of more detailed characteristics. Commit yourself to observing well and examining on foot these four plants, being born, in flower, without flower, and dried, in such a way that you can recognize them at first glance in all sorts of conditions and never forget them. Here already are four well-determined items of comparison; it is something, and to the extent that we will advance, these kinds of acquisitions will become infinitely more easy for you to make, and botany more agreeable to cultivate. Your idea about fruit trees is very good: we will discuss it again before they begin to flower again; but for the moment we have another course to follow, before taking up that one.

That is enough botany for one time. Your dear Husband, who hurries to rejoin you and who wants to carry my dispatches compels me to abridge them. I have found him so amiable, so obliging, and so agreeable to have around, that I would not see him depart without regret if I did not prefer your happiness to my pleasure; I enjoy in advance and with all my heart what you will savor with each other upon his arrival. He has become more dear to me still, since he has transformed into hope a desire I contented myself with feeding in the depths of my heart without flattering myself in seeing them realized. If there are here-below moments of pure joy, believe, dear friend, that it will be for my wife and myself when we will be able see you again and embrace you; you will see it, I hope, adorned by your gift and by a heart filled for you by the sentiments of which you are most worthy. I trust that the small cousin at least will be part of the voyage, I will have the pleasure of contemplating her progress, and we will cultivate to the best of our ability the rights we have to her friendship. But in this re-

gard, this excellent Mother who makes such nice voyages to you with your charming sisters, why would she not be part of yours; why not take her along . . .? Ah! poor madman that I am, I would not let myself wish. I will stop, despite myself, but remember always that it would be cruel and unjust of you to frustrate such a sweet hope, after having caused it to come into being.

I heard of the recovery of Mother as soon as I heard of her indisposition.[163] I know that you are her Doctor, I counsel her and beseech her to be docile to this one and to have no other. I received news fairly regularly of all your small students and their lovely nurse while the father was here; I hope you would not forget that it is through you from now on that I await it, and because I am so accustomed to having it often I would not endure an interruption without anxiety. Adieu, dear friend. I finish this letter in haste in order to carry it to your Husband, for fear that he not interrupt his business to climb up to my fifth floor, as he has done a number of times with an accommodating attitude of which I know the cost and for which you owe him even more caresses. My wife embraces you with all her heart and requests you expressly to give two kisses on her behalf to your future small traveling companion. For my part I give my own myself and do not want to fulfill such responsibilities by commission.

I have received fairly sad reports from Nyon which make me think that our small remuneration will be most welcome to my poor Aunt, For the letter she had written to me had left well before she could have received it.[164] I have thanked M. de Lessert for the goodness with which he undertook this small commission. For you, dear Cousin, it is more or less the same whether I thank you or you thank me, such is the reciprocal satisfaction of giving or receiving the offices of friendship. Our embraces to all whom you love. My greetings to M. Gaujet.

Paris, 9 August 1773[165]

. . .

Concerning botany, here are the names of the plants you sent me. I admire your patience and the neatness of your work, but nevertheless give yourself less trouble concerning the future. Content yourself with drying what you send me, in such a way that the essential parts are recognizable, but attach only what you are saving for your herbarium. You will have shortly a letter on botany. I am at the end of my paper. I will not give you my condolences on your widowhood, because in view of the lateness of my response, I believe it over for now, and that you will be able to convey my salutations to your dear Husband. I embrace your entire charming

family. My felicitations to M. Gaujet.[166] I wish sincerely for his happiness. You have good reason to believe that my wife would love and cherish your little nursling with all her heart. We love your family so tenderly, in imagining what it ought to be and by the mere fact that it belongs to you, that it would be difficult for this sentiment to increase at close range in actually finding it so lovable.

N° 5. *Anagallis arvensis.*

The pimpernel. Monophyllous calyx, with five sharp divisions, monopetalous Corolla, in the shape of a wheel, that is to say, flat and without tube, split in five lobes, five curved stamens. Ovary globose, capsule spherical, which nature seems to have shaped with humor; because although when the capsule is fairly ripe one sees there markings from top to bottom in a way [similar to] the rib of a melon as if it should open in this manner, nevertheless, when one presses it between the fingers, one is completely surprised to see that it opens across like a box of soap cakes. These lines marked from top to bottom serve no purpose, and are a true trap. The master deigns sometimes to play with the disciples. There is the Pimpernel with red flowers and there are others with blue flowers, but this is not exactly the same species.

N° 6. *Euphorbia* . . .

Spurge.[167] When uprooted, this genus of plants provide a caustic milk which makes warts fall off, and which should not be allowed to stay on the skin when one handles these plants. But touching the plant is not harmful; in letting it wither a little, the milk dries up quickly. Then one can handle the plant, and arrange it without any problem.

The spurges are very common and there are a large number of species that one can only determine by the foliage. Now your sample is without leaves. Because, as you will learn shortly, these kinds of saucers, which are underneath the flower and which you thought, perhaps, to be leaves, are not. Therefore I can name you the species only [with] another specimen.

The fructification of spurges is extremely singular and curious, but the description would be a bit long, and I have a great desire to exercise your eyes so much in furnishing you these descriptions that you will no longer need mine. In examining the plants of this genus, you will notice that they almost all carry their fructification in umbels, although they are not umbellifers.

N° 7. *Geranium dissectum.*

Crane's bill. The name *Geranium* is so common, even among gardeners, that it is almost not worth employing that of the Crane's bill less known and less general.

In all the Geraniums the stamens gather in a circle around the ovary

which they surround, but without holding together as in the mallows. There are five styles, and the fruit is formed of five shells which touch each other, but which are not attached except by the top of a long beard, in such a way that when the fruit is ripe, these shells separate at the bottom, curve from the bottom toward the top and resting all attached in a circle at the summit resembling in a very elegant form a chandelier or a candelabra. The dissected Geranium like several other species has its flowers always attached two by two on the same pedicel which splits in two to carry them.

N° 8. *ALSINE media.*[168]

Margeline [*Chickweed*].[169] This is the Pimpernel of good women, who cut it for birds; but botanists and even herborists reserve this name for N° 5 and only call this plant *Margeline* or *Alsine*.[170] It is necessary to avoid this confusion for the poor birds, because the true Pimpernel kills them while this one gives them great pleasure and benefit. Although the fructification in both genera has some similarity, there are actually very great differences. The flower of Margeline is always white, it has five petals, it has three Stigmas, its Capsule is elongated, it opens at the top; its stem is round, adorned by a file of hairs along a single side. The Pimpernel is monopetalous, Its corolla is always blue or red, its capsule is spherical, it opens across in two pieces, its stem is hairless (Without hairs) and square. Its leaves moreover have a character that is very easy to distinguish, by the black dots which one always sees on their lower surface and which the Margeline does not have.

N° 9. *Malva rotundifolia.*[171]

Dwarf Mallow. The mallow gives its name to the malvaceae family, which is numerous. Its general character is to have all the stamens united at the base in a cylinder which surrounds the ovary, as in the composites; with the difference that, in these the stamens are not held together at the top by the Anthers, and the filaments are separated; while in the mallows, the stamens are attached by their filaments, and the anthers are separated. This arrangement of the stamens in a cylinder or Column has given rise to the denomination of columniferae, which M. Crantz a German Botanist assigns to a numerous Class which comprises together with the Mallows, the Geraniums, and other genera.[172]

In the Malvaceae it is necessary moreover to examine:

1st. The fruit, which, for the most part is composed of several shells, ranged in a circle side by side, and which each contain a seed in an envelope.

2nd. The Calyx, which is double in almost all the genera, specifically the interior Calyx, which surrounds the flower and which, when it is fallen, envelops the first at the base. It is from the largest or smallest

number of leaflets or ligules which compose this exterior Calyx that the chevalier Linnaeus derives the characters of the principal genera of the Malvaceae.[173]

You can study the Mallow genus more conveniently in another species of Mallow, which has a red flower and is larger than this one and which is not less common, and more conveniently still in the Rose-mallow which I saw in abundance in your garden, and which is but another species of mallow, of which M. Linnaeus has made a different genus under the name of *Alcea*[174] because the exterior Calyx has many more points than that of the mallow properly speaking, which usually has only three leaves.

Botanists disagree among themselves whether the corolla of the mallow is monopetalous or polypetalous. Deign to take part in this discussion and indicate your opinion to me.

N° 10. *Campanula glomerata*.

Clustered bellflower. This Campanula, which you have apparently cut in a meadow, is not the prettiest species of its genus, which has some charming ones, among others the *pyramidalis* which is cultivated in flower gardens.

I have only two things to commend to your attention in this genus which is quite straightforward: 1st. The Manner in which the wide filaments of five stamens carpet and cover the top of the pericarp. 2nd. The singular manner in which the fruit opens when it is ripe to cast its seeds on the earth. It is superfluous to alert you that in all the campanules the flower is superior [the petals are above the ovary]. You have no need of being told these things.

30 August 1773

When you proposed to me, dear cousin, that I give you the knowledge of some plants for the amusement of your children, I thought one could make this diversion useful to them by a somewhat methodical approach, which accustomed them little by little to paying attention, observation, and especially to sound reasoning. Instead of a simple nomenclature, which would only overload their memories, would not entertain them very long, would soon be forgotten, and would be of no profit to them once they forgot it.[175] I started by testing their taste and yours with some general notions of the parts of the fructification where the most essential and the most constant characters of plants are found and by means of which one proceeds best to classify them. I offered you as the first objects five or six families of the most numerous and the most striking of the vegetal realm, and I tried to accustom your eyes to making out and distin-

guishing their essential parts expecting that you would be able to recognize the family likeness that distinguishes them even without fructification, but which only strikes sufficiently exercised eyes.

At the distance we are from each other, not being able to show you the objects concerned, I tried to indicate to you the manner in which you could find them yourself, but it did not take me long to realize that this procedure entailed more difficulties than I had foreseen; that however common the plants from which I drew my examples, I was not at all sure you knew them, nor, if you did know them, whether it would be under the same name that I employed to designate them, nor finally whether they would be available to you at the time you would have need of them in order to understand me.[176] I tried to obviate all of these uncertainties by the number, hoping that, among all that I named to you there would at least be something you could examine; I never knew if I succeeded sometimes, and I am still in doubt, for example, whether you know a single umbellifer.

Here is, in order to start the study of botany (because I will not deceive you about your still being in the preliminary stages), a difficulty which it is necessary to remove in one way or another. I have thought for this to propose to you to begin an herbarium for your use, and send me a sample of each plant that you enter in it. Each plant you send me that I believe to be well known to you by attentive and repeated observations, furnishes me, in sending you the name, a sure means to inform me without equivocation, because I will have to talk to you about something pertaining to the structure of this plant. But this process takes an extremely long time, due both to the small amount of time that your occupations permit you to give to this amusement as well as to the great care you give each plant sample that you send. Instead of attaching the sample as neatly as you do, it suffices to send me a dried branch which is not attached, which has leaves and flowers; all the same, it would be a bit crumpled. I would soon reach my limit in disentangling all this. But your extreme care takes us away from the goal, because there are only ten plants that you have sent to me up to now. It is necessary that you know at least two hundred by sight and by name before we can understand each other, and perhaps you know that many in gardens as well as in the country, but without knowing what they are, I am left to assume that you actually only know the ten I have named to you. I cannot take my examples from any but these until I am more informed as to your progress and it is not possible to proceed on such a slender basis.

This is not to say that I have changed my opinion regarding nomenclature; I do not believe it more useful than when I spoke to you about the

botany that one wants to pursue on one's own; but, again, in order to communicate with someone who is absent, it is necessary to agree on the names to assign to the objects of which one speaks. It is not in vain that I give you those of Linnaeus, even though they are in Latin. These are the only ones accepted across all of Europe and by means of which one can be sure to be understood by botanists of all nations. Before him, each botanist had his own names which almost all consisted of long phrases; it was necessary to know all these names to communicate with them or their students, which was a torment for the memory, and a loss for science. French names are subject to the same disadvantage; each province has its own, each estate, each trade its own, all different from each other. You have already seen that the Pimpernel of women and that of herborists are two different plants. It is the same for the talitron of the herborists and the thalictrum of the botanists, the coquelourde of the gardeners and that of the herborists, the argentine of florists and the argentine of peasants, the trifolium of the same florists and that of cultivators, etc.[177] In sum, everything is confused in the names given at random instead of methodically. It is therefore necessary to know those of Linnaeus to rise above the equivocal situation of common names, but this is not to say that you have to have them on the tip of your tongue except when necessary. Besides, the pronunciation is not always as difficult as that of the terrible *chrysanthemum* which so quickly scared you off. Omit the two *h*'s which only serve an orthographic purpose and do not affect the pronunciation: you will see that this same word *crisantémum* is not so rough to pronounce [in French] as at first it appeared.

I return, dear cousin, to my difficulty. It is absolutely necessary that you come to know by sight and by their names approximately two hundred plants and that I know which ones they are, so I can, with success and pleasure for you, speak to you about botany. Otherwise, my abstract details will bore you if you have not seen their application. To study nature agreeably and usefully, you must have its productions before your eyes.

My intention is indeed to make an herbarium for our small gardener, but, besides its taking time, its use will be to conserve the recollection of the plants she knows, but not to make them known to her [i.e., tell her their names]. You therefore need to put a bit more diligence into your shipments, or employ a gardener or apothecary who will show you plants and name as many plants as he can. I am so lost in my ramblings that I finish only because my paper has run out. I say nothing therefore today of you or of myself, but I charge your heart to interpret my own.

Letters to Margaret Cavendish Bentinck, Duchess of Portland[178]

Wootton, 3 September 1766

Madam,

If I had not had any taste for botany, the plants you sent via M. Granville would have given me one, and, to deserve the treasures I receive from you, I would like to learn to know them. But, Madam Duchess, I lack what is most essential for this, and it is not enough to have your plants, I would also need your instruction. Would that I were within range to profit from them sometimes! If, starting this study too late, I never had the honor of knowing at least the pleasure of learning and that of learning in your company. I would find there that precious Serenity of soul which arises from the contemplation of the marvels that surround us, and, whether or not I became a better botanist, I would thereby become Confident and Wiser and happier. This is a good, Madam Duchess for which I like to search following your example, and for which one never searches in vain. The more the mind clarifies and instructs Itself, the more peacable the heart remains. The study of nature detaches us from ourselves, and elevates us to its Author. It is in this sense that one truly becomes a philosopher; it is in this way that natural history and botany have a use for Wisdom and for virtue. To put our passions off the track with the taste for beautiful knowledge Is to chain love up with bonds of flowers.

Madam Duchess, please kindly accept my profound respect.

JJRousseau

20 October 1766

You have reason, Madame Duchess to begin the correspondence that you do me the honor of proposing, by sending me books in order to put me in the position of sustaining it: But I fear that this is wasted effort; I retain nothing of what I read; I have no more memory for books, there remains some only for persons, for the kindnesses that they have for me, and I hope therefore to profit more from your letters than from all the books

of the universe. There is one, Madame, in which you Know So well to read, and in which I would like to learn to spell a few words following your lead. Happy is the one who Knows to take enough taste from this interesting reading in order to have need of no other, and who, disdaining the instructions of men, who are liars, attaches himself to those of nature, which never lies! You study it with so much pleasure as Success, you Follow it in all its realms. None of its production is foreign to you; you Know how to match fossils, minerals, shells, cultivate plants, domesticate birds, and what do you not tame? I know one somewhat savage animal who would live with great pleasure in your menagerie, in awaiting the honor of being admitted one day as a mummy in your cabinet.

I would easily have the same tastes if I were in a position to Satisfy them; but a Solitary and a beginner of my age ought to retrace much of the universe If he wants to know it; and I who lose myself like an insect among the grasses of a meadow, I take care not to go scaling the palms of Africa or the cedars of Lebanon. Time presses, my faculties falter, I have neither eyes nor memory, and far from aspiring to know Botany one day, I barely dare to hope to herborize as well as the sheep which pass Under my window, and to know like them how to sort through my hay.

I vow nevertheless, as men are hardly ever logical, and as temptations come by the ease of Succumbing to them, that the garden of my excellent neighbor, M. de Granville, has given me the ambitious project of knowing its riches: but here is precisely what proves that Knowing nothing I Am made to learn nothing. I see plants, he names them for me, I forget them; I see them again, he names them again, I forget them once more, and there results from this nothing but the proof that we make without ceasing, I of his accommodating attitude, and he of my incapacity. Hence from the botanical side, little benefit; but a great deal for the pleasure of life in that of cultivating the society of a beneficent neighbor, obliging, kind, and to say even more If it is possible, to whom I owe the honor of being known to you.

See therefore, Madam Duchess, what an ignorant correspondent you have chosen for yourself, and what he will be able to offer of his knowledge against your enlightenment. I am in conscience obligated to advise you of the extent of mine: after this if you deign to be content with it, that is fine; I have no desire to refuse an agreement so advantageous for me. I will provide you with grass for your plants, reveries for your observations; I will instruct myself nevertheless with your kindnesses, and should I one day, become a better herborist, adorn with some flowers the crown botany owes you, for the honor you have done it in cultivating it.

I have brought from Switzerland some dried plants which did not rot

on the road; it is a herbarium to begin again, and I have no longer the same resources for this. I will detach however from what remains to me some of the less damaged samples, to which I will join some of this country in a very small number according to the extent of my Knowledge, and I will pray M. Granville to give it to you when he has the opportunity; but it is necessary beforehand to sort them, to remove the mold from them, and especially to find the names again half lost, which is for me not a small matter. And in connection with these names, how will we arrive, Madame, at understanding each other? I know no English names; those which I know are all from the *Pinax* of Gaspard Bauhin or from the *Species plantarum* of M. Linnaeus, and I cannot make the Synonymy with Gerard[179] which is prior to them both, nor with the Synopsis[180] which is prior to the second and which rarely cites the first; so that my Species becomes useless to me in naming for you the species of plant that I recognize in it, and for relating to it that which you can make known to me. If by chance, Madame Duchess, you have also the *Species plantarum* or the *Pinax*, this point of contact Would be very convenient for us to understand each other, without which I do not know how we would do so.

I have written to Mylord Marshal[181] two days before receiving the letter with which you honored me. I soon wrote him another in order to acquit myself of your commission and to request his congratulations on the benefit that his name procured for me with you. I have renounced all commerce in letters outside of him and another friend. You Will Be the third, Madam Duchess, and you will make me always cherish the botany to which I owe this honor. Past this the door is closed to correspondence. I became from day to day more lazy; It costs me much to write because of my discomforts, and content with such a good choice I limit myself, very Sure that if I do not understand any more, the same happiness would not Follow me.

I Beseech you, Madam Duchess, to accept my profound respect.

Wootton, 12 February 1767

I would not have waited a Single moment, Madam Duchess, to calm your anxieties concerning the health of Mylord Marshal, if I had been able to, but I feared, in writing you, only to increase your fears which were becoming alarming for me. The only thing which reassured me was that I had a letter from him of 22 November, and I presumed that what the newspapers were saying could not be more recent than that. I reasoned out all this with M. Granville, who was going to depart in a few days and

who took upon himself to give you an account of what we were thinking, while hoping that I could, Madam, give you more positive news. In this letter of 22 November Mylord Marshal indicated to me that he was feeling himself age and weaken, that he could no longer write without difficulty, that he had ceased to write to his relatives and friends, and that henceforth he would write to me only very rarely. This resolution, which was perhaps the effect of his illness, means that his Silence all this time Surprises me less, but it distresses me very much. I awaited some response to the letters I wrote him, I demanded it insistently, and I hoped to share it with you as soon as possible: nothing has arrived. I have also written to His banker in London, who Knows nothing either, but who, having made inquiries, assured me that Mylord Marshal had been very ill, but that he was much better. That is all I know, Madam Duchess. Probably you currently know more yourself, and, that assumed, I would implore you to be good enough to Write me a word to relieve my anxiety. Unless charitable friends instruct me in what it is important that I know, I will not be in a position to learn it myself.

I almost do not dare to speak to you about plants, ever since, having advertized too much to you the samples that I brought from Switzerland, I have been unable to send you anything. It is necessary, Madam, to confess all my misery to you: besides this debris not worth offering to you, I have been slowed down by the difficulty in finding their names, which for the most part are missing, and this difficulty which I have not overcome has made me feel that I undertook an enterprise impossible to execute at my age, in stubbornly wanting to know plants all on my own. In botany it is necessary to begin by being guided; it is necessary to learn at least the names of a certain number of plants empirically before studying them methodically: first one must be an herborist, and then become a botanist afterward, if one can. I wanted to do the opposite and found myself in a difficult situation. The books of modern botanists only instruct botanists; they are useless to the ignorant. We lack a truly elementary work, with which a man who would have never looked at plants could succeed in studying them on his own. Here is the book which I need, in the absence of verbal instructions, for where are they to be found? In my locale there is no other herborist but the sheep. An even worse difficulty is that I have very bad eyes for analyzing the parts of the fructification of plants. I would like to study the mosses and the grasses that are at my door: I practically go blind and I see nothing.[182] It seems, Madam Duchess, that you have exactly divined my needs in sending me two books which are the most useful. The *Synopsis* includes descriptions of what I find here and I am able to follow without raising my eyes, and the Petiver helps me a lot with its

drawings, which provide as much to my imagination as an object without color can.[183] It is still a great defect of modern botanists to have neglected this entirely. When I saw in my Linnaeus the class and order of a plant which I did not know, I wanted to envision this plant to myself, to know whether it is large or small, if the flower is blue or red, to represent to myself its appearance. Nothing. I read a characteristic description, according to which I could not imagine anything. It this not distressing?

Nevertheless, Madam Duchess, I am crazy enough to persist, or rather I am wise enough. Because for me this taste is an affair of reason. I sometimes have need of art to preserve myself in this invaluable calm in the midst of the agitations which disturb my life, to keep at bay those heinous passions which you do not know, that I have never known except in others, and which I do want to permit to approach me. I do not wish, if it is possible, that any sad recollections trouble the peace of my solitude. I want to forget men and their injustices. I want to be moved every day by the marvels of him who made them to be good, and whose work they have so scandalously degraded. The plants in our woods and mountains are still such as they originally came from his hand, and it is there that I love to study nature, because I assure you I do not feel the same charm herborizing in a garden. I find that it is not the same there: it has more brilliance, but is not as touching. Men say they embellish nature, and myself I find they disfigure it. I beg your forgiveness, Madam Duchess: in speaking of gardens, I have perhaps maligned yours a bit, but if I were inclined I would make reparation. Why may I not undertake only five or six herborizations there following you Under Dr. Solander![184] It seems to me that the small fund of knowledge that I would try to retrieve from his instructions and from yours suffices to revive my courage, often ready to succumb under the weight of my ignorance. I recounted to you gossip and reveries: too much so. These are the herborizations of winter; when there is nothing on the earth, I herborize in my head and unfortunately I find nothing there but weeds. Everything good in me has taken refuge in my heart, Madam Duchess, and it is full of sentiments that are owed to you.

JJ Rousseau

My plant scraps are ready or almost, but not knowing when to send them, I will await the return of M. Granville to ask him to bring them to you.

Wootton, 28 February 1767

Madam Duchess

Pardon my importunity: I am too touched by your goodness in relieving my anxiety About the health of Mylord Marshal, to postpone thanking you for it. I am not very sensitive to a thousand good offices where those who want to render them at all costs consult their taste more than mine. But care of the kind you have taken on this occasion truly moves me and will always find me full of gratitude. Madam Duchess, this sentiment will also be joined henceforth to all those you have inspired in me.

To say for the moment a small word concerning botany, here is the sample of a plant that I found attached to a rock, and which is perhaps known to you but which I do not know at all. By Its figure and Its fructification it appears to belong to the ferns, but by its Substance and its stature it seems to be of the moss family. I have such bad eyes, such a bad microscope, and too little knowledge to decide anything on that point. It is necessary, Madam Duchess, that you accept the homage of my ignorance and my good will; this is all that I can put into our correspondence from my side, after the tribute of my profound respect.

JJRousseau

Wootton, 29 April 1767

I receive with new gratitude, Madam Duchess, the new testimonials of your remembrance and your goodness in the book which M. Granville brought me, and in the instruction you were good enough to give me concerning the small plant which was unknown to me.[185] You have found a very good means of reviving my feeble memory, and I am very sure not to forget what I will have the honor of learning from you. This small *Adiantum* is not rare On our rocks, and I have even seen it several feet up on the roots of trees, from which it will be easy to detach it to transplant it on your walls.[186]

You will have occasion, Madam, to redress many errors in the small miserable debris of plants that M. Granville was kind enough to take charge of conveying to you. I ventured to give the names of the *Species* of Linnaeus to those which had none at all, but I did not have this confidence except with that which you would wish to mark well; you will please mark each error and take the trouble to alert me about it. In this hope, I have even included a small plant which comes to me from you, Madam Duchess, via M. Granville, and whose name I was not able to find myself.

This plant appears to me to approach the Ornithogalum (Star of Bethlehem) more than any other I know, but, its flower being closed and its root not being bulbous, I cannot imagine what it is.[187] I only send this plant to you to implore you to identify it for me.

Of all the kindnesses you have done me, Madam Duchess, that for which I am most grateful, and am most tempted to abuse, is to have given me news regarding the health of Mylord Marshal on several occasions. May I not once more, by your obliging intervention, find out if my letters have reached him? On the 16th of this month I sent him the fourth since his last. I am not asking that he respond, I only desire to learn if he has received them. I take all the precautions within my power to ensure that they reach him, but the precautions that are within my control in this regard, as in many others, are precious little in my situation.

I beg you, Madam Duchess, kindly to accept my profound respect.

JJRousseau

10 July 1767

Permit, Madam Duchess, that although living outside England I take the liberty to bring myself to recall myself to your memory. Your kindnesses have followed me during my voyages and contributed to the embellishment of my retreat. I have taken along the last Book which you sent and I amuse myself with making comparisons between the plants of this Canton and those of your Island.[188] If I dare to flatter myself, Madam Duchess that my observations can have the least interest for you, the desire to please you makes them more important to me, and the ambition to belong to you makes me aspire to the title of your herborist, as if I have the knowledge which would make me worthy to carry it. Accord me, Madam, I implore you, the permission to join this title to the new name which I substitute for the one under which I have lived so unhappily. I ought to cease to be so under your auspices, and the herborist of Madam the Duchess of Portland will console himself without pain for the death of J. J. Rousseau. For the rest I will try to ensure that this will not be a purely honorary title, I hope that it also draws to me the honor of your commands and that I will at least deserve by my zeal to fill them.

I am not signing my new name here and I do not date the place of my refuge, not having yet been able to request permission I need to obtain for this. If you would be so kind as to honor me with a response, you may, Madam Duchess, address me under my old name, at *Mrs Rougemont and Lieutenant, green Lettice Lane Cannon Street* which will reach me. I close by

fulfilling a duty which is precious to me, in asking you, Madam Duchess, to accept my very humble gratitude and the assurances of my profound respect.

12 September 1767

I am all the more touched, Madam Duchess, by the new proofs of kindness with which you have been pleased to honor me, since I was afraid that distance would make you forget me. I will always attempt by my sentiments to merit the same graces, and the same recollections by my assiduity in recalling them to you. I am delighted by the permission you accord me and very proud to have the honor of belonging to you in some way. To begin, Madam, to fulfil the functions you have made precious to me, I am enclosing two small plant samples that I found in my neighborhood, among the heaths which border a park, in a fairly humid area, where there also grow fragrant Chamomile, *sagina procumbens*, *hieraicum umbellatum* of Linnaeus, and other plants I cannot name for you exactly, not having my Botany books here yet, except for the *Flora Britannica* which has not left me for a single moment.[189]

Of these two plants, one, no. 2, appears to me to be a small gentian, called *Centaurium palustre luteum minimum nostras* in the Synopsis.[190] Flor. Brit: 131.

As for the other one, no. 1, I would not know what to say it is, unless it might perhaps be an *Elatine* of Linnaeus, called *Alsinastrum Serpylifolium*, etc. by Vaillant.[191] The phrase describes it fairly well, but the *Elatine* should have eight stamens, and I could never discover more than four. The flower is very small, and my eyes, already naturally weak, have cried so much I am losing them before time: thus I do not trust them anymore. Kindly tell me, Madam Duchess, which one it is: it is I, by virtue of my employment, who should instruct you, and it is you who instructs me. Do not disdain to continue, I implore you, and permit me to recall for you the plant with the yellow flower that you sent last year to M. Granville, of which I sent you a sample in order to learn the name.

And concerning M. Granville, my good neighbor, permit me, Madam, to confess the anxiety that his silence causes me. I wrote to him, and he has not responded at all, he who is so punctual. Is he ill? I am truly distressed about this.

But I am even more so with regard to Mylord Marshal, my friend, my protector, my father, who has completely forgotten me. No, Madam, this cannot be. Whatever one could have done, I can be in his disfavor, but I

am certain he still loves me. What afflicts me in my position, is that it deprives me of the means of writing him. I hope nevertheless to have the occasion shortly, and I do not need to tell you with what willingness I will seize upon it. In waiting, I implore your kindess in getting news, and, if I dare add, to get him to say a word about me.

I have the honor to be with profound respect, Madam Duchess,

Your very humble and very obedient servant and Herborist.

I had told M. Davenport's gardener I would show him the rocks where the small *adiantum* grows, so that you could, Madam, get the plants. I do not forgive myself for having forgotten. These rocks are on the south side of the house and look north. It is very easy to detach the plants, because there are some which grow on the tree roots.

The long delay, Madam, in the departure of this letter, caused by the difficulties attaching to my situation, enables me to rectify my blunder Concerning the enclosed plant no. 1 before it leaves. For having received my Botany books during the interval, I found there, with the help of drawings, that Michelius had made a genus of this plant under the name of *Linocarpon*, and that Linnaeus had placed it among the species of flax. It is also in the Synopsis under the name *Radiola*, and I would have found the drawing in the *Flora Britannica* that I had with me; but plate 15, where this drawing is to be found, is missing from my copy and is only in the *Synopsis*, which I did not have. The point of this long verbiage, Madam Duchess, is to explain to you how my blunder arises from my ignorance, in truth, and not from my negligence. I will never put any in the correspondence you permit me to have with you, nor in my efforts to deserve a title by which I feel honored; but, as long as the inconveniences of my present position last, the exactitude of my letters will suffer, and I close this one without being certain yet of the day on which I will be able to send it.

4 January 1768

I would not have waited so long, Madam Duchess, to convey to you my very humble gratitude for the trouble you have taken in writing in my behalf to Mylord Marshal and M. Granville, if I had not been detained almost three months in the room of a friend who fell ill at my home, and whose bedside I have not left the whole time, without being able to give a moment to any other concern.[192] Providence finally blessed my zeal: I

cured him almost despite himself. He has left here well restored, and the first moment his departure gave me is employed, Madam, in fulfilling for you a duty that I number among my greatest pleasures.

I have received no news of Mylord Marshal, and, not being able to write to him directly from here, I took advantage of the departure of my friend to have a letter sent to him: let us hope it will find him in that state of health and happiness that the most tender wishes of my heart ask of Heaven for him for the rest of his days! I received from my excellent neighbor, M. Granville, a letter which completely delighted my heart.

Will you permit me, Madam, to take the liberty of disagreeing with you concerning the nameless plant you sent to M. Granville, and of which I sent you back a sample with the Swiss plants, in order to ask you to name it for me? I do not believe it is the *viola lutea*, as you indicated to me, the two plants having nothing in common, it seems to me, but the yellow color of the flower. The one in question appears to me to be of the lily family, with six petals, six stamens in a tuft of plumes; if the root were bulbous I would take it for an ornithogalum; since it is not, it seems to me to resemble strongly an *Anthericum ossifragum* of Linnaeus, which Gaspard Bauhin called *Pseudo-Asphodelus anglicus* or *scoticus*.[193] I confess, Madam, that I would be happy to assure myself of the true name of this plant, because I cannot be indifferent regarding anything that comes to me from you.

I did not believe that a number of the new plants with which you have just adorned your gardens at Bullstrode were to be found in England, but in order to find nature rich everywhere, it is only necessary to have eyes which know how to see its riches. Here, Madam Duchess, is what you have and what I lack: if I had your knowledge in herborizing in my locale, I am certain that I could obtain many things which could perhaps have their place at Bullstrode. With the return of nice weather I will take note of the plants I observe, to the extent that I can recognize them; and, if there happens to be one which suits you, I will find the means to send it to you, either in nature or as seeds. If, for example, Madam, you would like to plant the *Gentiana filiformis*[194] I can easily gather some seeds next Autumn because I have discovered an area where it is plentiful. Please, Madam Duchess, since I have the honor of belonging to you, do not leave without function a title in which I place so much glory. I do not know any other, I protest to you, which flatters me any more than that, Madam Duchess, of being with a profound respect all my life your very humble and very obedient servant and Herborist.

Lyon, 2 July 1768

If it were in my power, Madam Duchess, to put exactitude in some correspondence, it would assuredly be in that with which you honor me; but apart from the indolence and the discouragement which Subjugate me more each day, the secret worries with which I am tormented absorb in spite of myself the little activity which remains to me and has me embarked now on a great voyage which alone would be a terrible affair for a lazy fellow like me. However, as botany is the principal object, I will attempt to appropriate it to the honor that I enjoy in belonging to you in informing you about my herborizations at the risk of boring you, Madam, with trivial details which are not new to you. I could tell you some interesting things about the Garden of the Veterinary school of this City, whose directors, naturalists, botanists besides being very pleasant, are at the same time very communicative; but the exotic riches of this garden overwhelm me, trouble me by their multitude, and in being forced to see too many things all at once, I discern and retain nothing at all.[195] I hope to find myself a bit more at home in the mountains of the Grande Chartreuse, where I expect to go herborizing next week with two of these gentlemen who want very much to undertake this expedition, and whose knowledge will make it very useful to me. If I had been able to consult your knowledge more often, Madam Duchess, I would be more advanced than I am.

However rich the Garden of the Veterinary School may be, I was nevertheless unable to find either the *Gentiana campestris*[196] or the *Swertia perennis*[197] there; and as the *Gentiana filiformis* had not yet even emerged from the ground before my departure from Trye, it was therefore impossible for me to collect the seed, and it turns that with the greatest zeal to fulfill the commissions with which you have kindly honored me, I have not been able to execute a single one. I hope to be less unhappy in the future and to be able to carry with more success a title which does me honor.

I have begun the catalogue of an herbarium given to me as a present and which I expect to augment during my travels. I thought, Madam Duchess, that in sending you this catalogue, or at least that of the plants I have in duplicate, if you would take the trouble to mark those you lack, I could have the honor of sending them to you fresh or dried, according the manner which you would like for the augmentation of your garden or herbarium. Give me your requests, Madam, for the Alps, a few of which I am going to traverse. I ask you in favor to be able to add to the pleasure I find in my herborizations that of serving you. My fixed address during my travels will be the following:

M. Renou[198]
c/o Messrs. Boy de la Tour and Co.
Lyon

I dare to beg you, Madam Duchess, to be so kind as to give me news of Mylord Marshal every time you do me the honor of writing me. I greatly fear that everything which happens at Neuchâtel afflicts his excellent heart: because I know that he truly loves that country, despite the ingratitude of its inhabitants. I am distressed also to have no news of M. Granville. I will be attached to him my entire life.

I beg you, Madam Duchess, to accept kindly my deep respect.

At Bourgoin in Dauphiné, 31 August 1769

Madam Duchess,

Two consecutive voyages, immediately after the receipt of the letter with which you honored me last 5 June prevented me from telling you sooner of my joy both for the preservation of your health as well as the restoration of that of your dear son about whom you were in such distress, and my gratitude for the marks of remembrance that you were pleased to accord me. The second of these trips was made for your sake, and seeing that the season for herborization that I had in view was passing by, I preferred on this occasion the pleasure of serving you to the honor of replying to you. I therefore departed with some amateurs for Mount Pila, situated twelve or thirteen leagues from here in the hope, Madam Duchess, of finding some plants or some seeds which merited a place in your herbarium or in your gardens. I did not have the honor of meeting my desired expectation. It was too late for the flowers and seeds; the rain and other accidents —we encountered obstacles at every turn—made the expedition as useless as it was disagreeable, and I brought almost nothing back. Here nevertheless, Madam Duchess, is a note on the debris of my puny collection. This is a short list of plants of which I was able to conserve something in nature, and I have added an asterisk to each of those from which I gathered some seeds, the majority in a very small quantity. If among these plants or among the seeds there is something or the entirety which suits you, deign, Madam, to honor me with your orders and indicate to whom I should send the packet, either in Lyon or in Paris, in order to get it to you. I hold the entirety ready to send immediately after the receipt of your note. But I greatly fear that there will be nothing worthy to include there, and that I will continue to be in your regard a useless servant despite his enthusiasm.

I have the mortification of not being able at present to send you, Madam Duchess, the seed of *Gentiana filiformis*, this plant being very small, very short-lived, difficult to locate for eyes which are not botanists, a priest, whom I counted on consulting for this purpose having died in the interval and not knowing anyone in the country to whom I could give my commission.

A sprain which a fall inflicted on my right hand, not permitting me to write except with much pain, forces me to finish this letter sooner than I would have desired. Condescend, Madam Duchess, to accept with kindness the zeal and the profound respect of your very humble and very obedient servant and herborist.

Renou

Plants carried from Mount Pila and the shores of the Rhône.

Those of which I was able to gather some seeds Are marked by an asterisk.[199]

Digitalis purpurea.
Digitalis lutea major. Linnaeus did not speak of this plant.
*Arnica montana.
*Doronicum pardalianches.
Aconitum Napellus.
Arbutus alpina.
*Athamanta meum.[200]
Vaccinium Myrtillus.
Rosa alpina.
Impatiens noli me tangere.[201]
*Melissa grandiflora.[202]
Daphne Mezereum.
Antirrhinum purpureum.[203]
Antirrhinum bellidifolium.
*Polygonum Bistorta.
Prenantes purpurea.
Alchemilla vulgaris.
*Alchemilla alpina.
Crataegus aria.
Celtis australis.
Polypodium rhaeticum.[204]
Polypodium Dryopteris.[205]
Acrostichum septentrionale.
*Cotyledon umbilicus. ♀

*Dianthus superbus.
*Gypsophila muralis.
*Carthamus lanatus.
*Oenothera biennis.
*Moeringia muscosa[206]
Lichen usnea.[207]
Genista sagitalis.
Nardus Stricta.
Festuca vivipara.

Monquin, 21 December 1769

It is, Madam Duchess, with much shame and regret that I part so late with the small shipment that I had the honor of announcing to you, and which assuredly was not worth the trouble of waiting for it. At last, since better late than never, I sent a box off to Lyon last Thursday addressed to M. le Chevalier Lambert containing the plants and seeds to which I add this note. I am extremely desirous that the whole reach you in good condition; but as I dare not hope that the box will not be opened en route, and even several times, I greatly fear that these plants, fragile and already spoiled by the humidity, will arrive completely destroyed and unrecognizable. The seeds at least could, Madam Duchess, compensate for the plants if they were more numerous, but you will forgive their misery on account of the various accidents which have opposed my care on that score. Some of these mishaps were in fact laughable, although they gave me much vexation. For example, rats ate almost all the seed of bistort which I had spread out on the table to let dry; and, having placed other seeds on my windowsill for the same purpose, a blast of wind sent all my papers flying into the room, and I was condemned to the penitence of Psyche: but it was necessary to do it myself and the beavers did not come to help me at all.[208] All these misfortunes annoyed me all the more as I would have liked some of what was left over from Bullstrode to go to Callwich, but I will try to be more well-supplied another time; because, even though the honest people who have me at their disposal are displeased to see me finding delights in botany and seek to turn me away from this innocent amusement in pouring out the poison of their vile souls there, they will never make me renounce it voluntarily. Hence, Madam Duchess, kindly honor me with your orders and make me merit the title you have permitted me to take; I will try to make up for my ignorance with enthusiasm in order to execute your commissions.

You will find, Madam, an umbellifer to which I took the liberty of giving the name of *Seseli Halleri*, in spite of not finding it in the *Species*, even though it is well described in the last edition of the plantes de Suisse of M. Haller, no. 762.[209] It is a very beautiful plant, which is even more beautiful in this country than in more southern climes, because the first frosts bathe its dark green in a beautiful purple, and especially on the crown of the seeds, since it flowers only in late season which also means that the seeds scarcely reach maturity and that it is difficult to collect any. I have nevertheless discovered a way to gather some that you will find, Madam Duchess, with the others. You will have the goodness to commend them to your Gardener, for, once again, the plant is lovely, and so uncommon that it still does not have a name among botanists. Unfortunately the Specimen which I have the honor of sending you is paltry and in a very bad state; but the seeds will make up for it.

I am very obliged to you, Madam, for having the kindness to give me news of my excellent neighbor, M. Granville, and the testimonials of remembrance of his amiable niece, Miss Dewes. I hope that she remembers sufficiently the features of her old shepherd to agree that he does not at all resemble the Cyclops that it pleased M. Hume to have engraved under my name. His engraver depicted my visage just as his pen depicted my character. He did not see that the only thing that all that portrayed was himself.

I beg you, Madam Duchess, to accept kindly my profound respect.

Renou

CATALOG OF PLANTS.

Echinops Sphaerocephalus.
Gentiana acaulis.
Gentiana Pneumonanthe.
Cotyledon umbilicus Veneris.[210]
Catananche caerula, n°. 1.
Catananche caerula, n°. 2.
*Seseli Halleri.[211]
Dianthus Superbus.
Doronicum Pardalianches.
Rosa Alpina.
Moehringia muscosa.
Acrosticum Septentrionale.
Polygonum Bistorta.
Antirrhinum Bellidifolium.

*{Epilobium angustifolium.
{Epilobium angustifolium, var γ.
Alchemilla Alpina.
Prenanthes viminea.[212]
Prenanthes purpurea.
Melissa grandiflora.[213]
Vaccinium Vitis idaea.
Carthamus lanatus.
Athamanta Meum.[214]
Celtis australis.
{Arnica montana.
{Arnica Alpina.
Cyperus fuscus.
Cyperus flavescens.
Digitalis lutea magno flore. C.B.[215]
Lichen barbatus.[216]
Festuca vivipara.
Crucianella angustifolia.
Aster amellus.

CATALOG OF SEEDS.

1. Athamanta Cervaria.[217]
2. Athamanta Meum.
3. Carthamus lanatus.
4. Alchemilla Alpina.
5. Seseli Halleri.
6. Aster Amellus.
7. Polygonum Bistorta.
8. Arnica montana.
9. Dianthus Superbus.
10. Doronicum Pardalianches.
11. Gypsophila muralis.
12. Cotyledon umbilicus. ♀
13. Melissa grandiflora.
14. Montia fontana.
15. Antirrhinum purpureum.[218]
16. Bulpleurum falcatum.
17. Moehringia muscosa.
18. Ornithogalum Narbonense.
19. Cucubalus otites.[219]

N.B. I inadvertently placed with Nardus the name Celtica; that is an error, it should be *Nardus Stricta*.

Another error. The plant labeled *Cyperus fuscus* is not that at all; it is a different galingale that I find neither described nor cited by any other botanist except Michelius. Here is his phrase:

> Cyperus radice repente, odorâ, locustis unciam longis, et lineam latis. Tab. 31, fig. 1. Mich. Nov. Plant. Gen:. p. 45.[220]

It remains for me to beseech Madam Duchess to have the kindness to let me know if she finds an error in the names.

23 January 1772

Permit, Madam Duchess, that a servant as zealous as useless may have the honor to be remembered to you. Since my return to Paris, having no opportunity to search in the less known places for some slightly unusual plant, I have at a sheer loss not dared to importune you with my letters. But finally feeling the desire increase daily to renew to you the homage of my zeal, I believed you would forgive this liberty of title that you have permitted me to take, even though to my great regret without exercise for a long time. If there is something in this country which can attract the favor of your orders, you will know by my alacrity in executing them, that obeying you is one of the good things in my life.

You should, Madam, since the return of M. Dr Solander enjoy his valuable discussions of his voyages and the numerous discoveries that he has made. I learn that animated by his success he is going to brave new perils in order to extend the inventory of riches of the human species. How happy he is thus to be able make the circumnavigation of the globe for the profit and instruction of our other faint-hearted homebodies; and if he succeeds in finally finding men, in whatever faraway region he is forced to go search for them, I am very certain that he will be very well compensated for his pains. O beautiful voyage, Madam Duchess, O great and worthy enterprise! What would have I not given to be able to follow in his footsteps? The least real utility for my ungrateful contemporaries, makes me soon forget all the evils that they have done me. O if I were still young, if I were alone . . . if . . . but all these if-thens do not make the thing possible, and only increase my regrets.

Being no longer useful either for myself or for others, I amuse my idle childhood with projects truly worthy of a child. I am for example considering commencing a vegetal collection of fruits and seeds of all species,

and on the course I am permitted to traverse, this collection will begin to take a sort of form fifty or sixty years from now. Nevertheless I have delivered myself up to it with the same ardor as an old madman of the King of Armenia started to build a City, when he only needed to think about building a tomb. Madam Duchess, if among the rejects of your cabinet, or those of the treasures of botany brought back from austral countries by M. Solander, there is found some trifle of fruits or seeds with which you would not disdain to enrich my small treasure, that would be a glory of which I would sense very well the price to inscribe your illustrious names among those donors who wish to contribute. This indiscretion on my part, were it rejected, will always have value for me, if it attracts the honor of a response the inestimable good, to learn from you yourself, Madam Duchess the good news of your health, and the confirmation of the kindnesses with which you have sometimes accepted the homage of my respect.

JJ Rousseau

rue Platiere in Paris

Having no more correspondence in England, I am deprived of news of my old and good neighbor, M. Granville, whose kind society I will always miss. What also, if I may, Madam, ask you, is his kind niece Miss Dewes doing of whom you have kindly given me news previously. She had such young ewes, that she ought to have found soon a shepherd who will make her happy. It is a reward which repays the Christian charity with which she supported the ramblings of her old shepherd, for whom the title was not less useless than is for you the one you have permitted me to bear.

Paris, 17 April 1772

I have received, Madam Duchess, with much gratitude, and the letter with which you honored me on 17 March, and the parcel of numerous seeds with which you have been so kind to enrich my small collection. This shipment will make in all ways the most considerable part of it and already reawakens my enthusiasm to complete it as soon as possible. I am likewise very grateful for the kindness of M. Dr. Solander to wish to contribute something as well; but as I have found nothing in the packet which indicates to me what could have come from him, I remain in doubt whether the small number of seeds or fruits that you indicated to me that he sent was enclosed in the same packet or Whether he made up another separately which, if this is the case still has not reached me.

I thank you also, Madam Duchess, for your goodness in notifying me

of the happy marriage of Miss Dewes and M. Sparrow: I rejoice in it with all my heart, and for her, so well made to make an honest man happy and to be happy, and for Her worthy Uncles, whom the happy success of this marriage will fill with joy in their old age.

I am very grateful to be remembered by Lord Nuneham: I hope he will never doubt my sentiments, as I never doubt his kindnesses. I would be pleased to have the pleasure of seeing him in Paris during the ambassadorship of Lord Harcourt, but I am assured that he has not come, and this is not a mortification for me alone.

Can you have doubted for a moment, Madam Duchess, that I had not received with as much attentiveness as respect the book on English gardens you thought to send me?[221] Although its higher price has come for me from the hand from which I would have received it [as a gift], I do not consider that which it has by itself, since it is esteemed and translated in this country; and besides I should love this subject, having been the first on terra firma[222] to celebrate and make known these same gardens. But that of Bullstrode, where all the riches of nature are gathered and arranged with as much wisdom as taste, would merit a particular song of praise.

In order to create a diversion to my taste from my occupations, I plan to make herbaria for naturalists and amateurs who would like to acquire some. The Vegetal realm, the most pleasant of the three and perhaps the most rich, is very neglected and almost forgotten in cabinets of natural history, where it ought by preference to shine. I have thought that small herbaria, well chosen and made with care, could encourage the taste for botany, and I am going to work this summer on the collections that I will prepare, I hope, to be distributed a year from now. If by chance there is someone among your acquaintances who might wish to acquire such herbaria, I will serve them to the best of my ability, and I will continue to do so even if they are satisfied with my attempts. But I will particularly desire, Madam Duchess, that you will sometimes honor me with your requests, and to merit always, by my acts of zeal, the honor I have in belonging to you.

JJRousseau

19 July 1772

It is, Madam Duchess, with an inexcusable but quite involuntary quid pro quo that I have the honor so late of thanking you for the rare fruits that you have had the goodness to send me on behalf of M. Doctor Solander and the letter of 24 June by which you advised me of this shipment. I

also owe this learned[223] naturalist thanks which will be received all the more favorably, if you deign, Madam Duchess, to take charge of them as you have the shipment, which comes directly from a man who does not have the honor to be known to him. To crown your favors you wish further to promise me the names of the new genera when he will have assigned them: this presumes also the description of the genus, since names deprived of concepts are just so many words, which serve less to adorn the memory than to overburden it. For all the kindnesses on your part I can only offer you, Madam, as a sign of my gratitude the pleasure that I have in being obliged to you.

It is not without a real disappointment that I learn that this great voyage on which all erudite Europe had its eyes will not take place.[224] This is a great loss for cosmography, for navigation, and for all natural history in general and it is, I am sure, a distress for this illustrious man whom the zeal for public instruction makes insensitive to the perils and fatigues in which experience has already so perfectly instructed him. But I see each day better that men are everywhere the same and that the progress of envy and jealousy causes more harm to souls than that of enlightenment which is the cause, can only do good for minds.

I have certainly not forgotten, Madam Duchess, that you desired the seed of the *Gentiana filiformis*; but this recollection only increases my regret at having lost this plant without providing myself with any means to recover it. At the place itself where I found it which is at Trye, I searched in vain the following year, and either I had not recalled the place well or the time of its blossoming, whether it had not seeded and whether it was not renewed, it was impossible for me to find the least vestige. I have often experienced the same mortification on the subject of other plants which I found disappeared from the places where previously one had encountered them in abundance; for example, the *Plantago uniflora*[225] which used to border the pond of Montmorency and for which I searched in vain last year with the best botanist and who had better eyes than I; I protest, Madam Duchess, that I would with all my heart make the voyage to Trye to cut this small Gentian and its seed, and send you both if I had the least hope of success. But not having been able to find it the following year being again at the places, what likelihood is there that at the end of several years when all the information which still remains to me is effaced, I can find the trace of this small and fleeting plant? It is not here in the jardin du Roi nor, as far as I know, in any other garden, and very few people even know it. With regard to the carthamus lanatus, I will join the seed to the samples of herbaria that I hope to have the honor to send you at the end of the winter.

I learn, Madam Duchess, with a very tender joy of the perfect recovery of my old and good neighbor M. Granville. I am very touched by the trouble you have taken to instruct me and you have thereby redoubled the value of such good news. I beseech you, Madam Duchess, to accept with my respect, my lively and true thanks for all your kindnesses.

22 October 1773

I received in its time the letter with which Madam Duchess honored me on 7 October; with regard that the one of which there was made mention written fifteen days before I have not received it; the quantity of foolish letters which come to me from all parts by post forces me to reject all those whose writing is not known to me, and it is possible that in my absence the letter of Madam Duchess was not distinguished from the others. I would reclaim it from the post if experience had not taught me that my letters disappear as soon as they are returned, and that it is not possible for me to see them again. It is thus that I lost one from M. Linnaeus that I was never able to see again after having learned that it was from him, even though I employed for this the credit of someone who has much of it in the post.

The testimony of remembrance of M. Granville that Madam Duchess has had the kindness to transmit to me gives me a pleasure in which nothing would have been lacking, if I had learned at the same time that his health were better.

M. de St. Paul should pass to Madam Duchess two samples of portable herbaria which seem more convenient and almost as useful as the large ones.[226] If I had the happiness that one or another or both might satisfy the taste of Madam Duchess I would give myself a true pleasure in continuing them, and this would save for me for botany the remains of a taste nearly extinguished and which I miss. I await on that point the orders of Madam Duchess and I implore her to accept my respect.

Letters to Pierre Liotard

Bourgoin, 7 November 1768

I received, Monsieur, the two letters which you had the kindness to write me;[227] I did not respond at all to the first, because it was a response in itself, and did not require one. Enclosed with this letter I am sending you the catalogue which accompanied the second, and on which I have indicated the plants I would like to have. The denominations of many of them are not exact, or at least are not in my *Species* in the 1762 edition.[228] You will oblige me by returning them with the assistance of M. Clappier, whom I thank, and to whom I send regards.[229] I accept the offer of some mosses that you kindly add, so long as you have the kindness to include the names exactly, because I would perhaps have great difficulty in identifying them without the help of my Dillenius, which I no longer possess.[230] With regard to the price, I would settle it with generosity if I could heed only the liberality of my heart; but, my situation forcing me in all things to the common prices, I ask you to settle this in the way you think honestly compensates you, without forgetting to add to this amount the postage, and other small charges for which you ought to be reimbursed; and, as I have no connection in Grenoble, I will send you the total amount by mail, unless you indicate to me some other way. The offer to come yourself is obliging, but I do not accept it, considering that I could not profit from it, that it is not the season for herborizing, and that I am not in a condition to go out. Take care, my dear monsieur Liotard; I greet you with all my heart.

Renou

Could you tell me if the *pistacia therebinthus* and the *osiris alba* grow near Grenoble?[231] I believe I found them both on the Bastille, but I am not certain.[232]

Bourgoin, 23 December 1768

I was waiting, monsieur, to acknowledge reccipt of your package, to give the payment according to your instruction to the one who was supposed to bring me The iris Sambucina. But no one having come, I did not want to wait any longer to thank you for the plants that you furnished me

and that I did not expect any more, given the long period that passed since the return of your list. I have not verified the total number of the above-mentioned plants; I Know Only that I found only about fifty of those which I requested, and which might have been able to fill the empty slots in my herbarium: all the others are doubles of those which I already have, so that I was Sure therefore not to have requested them, and some, such as the white lily, the false acorus,[233] the meadow saffron, The bugle, etc. Are So common that it is not even worth the trouble of sending them. There were also several whose Labels are false, No doubt because you transposed them inadvertantly; for example, the one which bears The name *yucca gloriosa* is the white nenuphar,[234] that which bears the name *Melochia pyramidata* is a Boerhavia, etc. There are others whose names Are Merely Suspect to me, because my ignorance prevents me from confirming anything; thus, the one which bears the name of *hieracium premorsum*, having neither the truncated root, nor the dentated leaves, appears to me to be a *hieracium aurantiacum*, but this is what I do not dare to affirm, likewise for the identity of others that a glance by M. Clappier would easily determine for us. Finally, I would have liked that all those which are remarkable for their root, such as the *Tozzia alpina*, not have been deprived of it, and this is a small attention you would do well not to omit in herborizing. Apart from this several of your plants are well conserved and I am very happy with the shipment.

My dear monsieur Liotard, I will not say quite the same for the price, and on this occasion I will not make use of the liberty you gave me to augment It. In Grenoble you made the price too low; here I find you make it too high. You have passed successively to two extremes; I find it reasonable to take a middle position. Fifty francs seemed too high to me for fifty plants at the very most from which I have profited. I thought that thirty-Six francs was a very large payment for me, and even high for the thing in question. Hence, in adding a small crown for the postage and small charges, it Is thirty-nine livres that I am sending you the usual way, postage paid, by mail. If you are not satisfied, I request you of course to let me know; because I want everything [to be] sure Above all, not Only that you should have reason to be, but that you Are in fact: but I would like it also if we could settle upon a price more in my range, so that having younger legs and a more robust body, you can, in your mountain herborizations, also herborize sometimes a bit for me.

I enclose a letter for M. Clappier, which I ask that you give to him. I reiterate my thanks and Greet you, Monsieur, with all my heart,

Renou

Letters to Pierre-Alexandre Du Peyrou

29 April 1765

. . . I have more than ever a passion for botany; but I see with confusion that I do not yet know enough plants empirically to study them by means of a System.[235] Nevertheless I will not be discouraged, and in good weather I plan to spend about fifteen days with M. Gagnebin so as to be in a position to follow my Linnaeus . . . .[236]

11 June 1765

If I stay here one day more, I am taken; I am leaving, my dear Host, for la Ferrière where I will await you with the greatest eagerness but without becoming impatient. What made up my mind is that they tell me that you have begun to go out.[237] I advise you not to forget our provisions of coffee, sugar, coffee pot, lighter, and the entire apparatus so that we can make coffee in the woods when we wish. Bring Linnaeus and Sauvages, an amusing Book, and some games for us to entertain Ourselves somewhat if we are stuck inside during bad weather.[238] It is necessary to foresee all eventualities in order to avoid boredom and idleness.

. . . Good day, I expect to depart tomorrow morning, if the weather is nice, to sleep at Le Locle, and dine or sleep at la Ferrière Thursday the day after. I embrace you.

La Ferrière, 16 June 1765

Here I am, my dear Host, at la Ferrière where I have arrived only to stay in my room with a terrible cold, a fairly high fever, and quinsy, a malady to which I was very susceptible in my youth but from which I was hoping age had exempted me. I was mistaken; this attack has been violent; I hope it will be short. . . .

From the little that I have seen of botany I understand that I will depart from here more ignorant than I arrived, more convinced at least of my ignorance, since in verifying my knowledge of plants it turns out that many

of those I thought I knew I do not know at all. God be praised; one always learns something in learning one knows nothing. . . .

Bourgoin, 19 December 1768

I am very touched by the commission you gave to Gagnebin: here is truly an act of friendship, an act of those toward whom I will always be tender, because they are chosen according to my heart and according to my taste. I surely owe my life to plants; it is not that I owe them advantages, but that I owe them the pleasant enjoyment of some respite in the midst of the bitterness with which my life is inundated: as long as I herborize, I am not unhappy, and I answer you that, if they will permit me, I will never cease to herborize the rest of my life from morning until evening. Moreover, I would like the collection by M. Gagnebin to be very small, and that it not consist of common plants that one finds everywhere; I will not conceal from you that I already have many alpine plants, and the rarest ones; nevertheless, as there are still a very large number which I lack, I do not doubt that there will be some in your shipment that will give me great pleasure by themselves, besides that of receiving them from you. For example, although I am already fairly rich in Gentians, there is one I have not been able to find yet, and that I covet very much; it is the great *purple Gentian*,[239] the second in the order of the *species* of *Linnaeus*. I have the *tozzia alpina*, Linn.: but it lacks the root, which is the most curious part of this plant, besides being difficult to dry and conserve. I have the *uva ursi*[240] in fruit, but I do not have the flowers. I have *Azalea procumbens*, but I lack other beautiful *chamaerhododendros* of the Alps.[241] I have only one miserable *Androsace*. I do not have the *Cortusa Matthioli*, etc. The list of what I have would be long, but the list of what I do not have would be longer still; but if you would like to send me the list of what Gagnebin will send you, I can note on it what I lack, so that the rest, being superfluous in my herbarium, can reside in yours. I have ruined myself with books on Botany, and have resolved not to buy any more; nevertheless I feel that becoming fond of Alpine Plants, I cannot pass up that of Haller.[242] You will oblige me by kindly letting me know its exact title, its price, and the place where you found it; since France is still so barbarous in botany, one can find there almost no Book of this science; and I have been obliged to have the few that I have sent from Holland and England at great expense; still I have searched everywhere for those of Clusius without being able to locate them.[243]

Here is much chatter about botany, for which I see, with great regret, that you have completely lost the taste. Nevertheless, since you celebrated my *Apocyn* a little bit, I would like to send you some seeds of the silk tree and the sugar apple that were recently brought to me from the Islands.[244] When you start furnishing your garden, I will be eager to contribute to it. Good day, my dear host; we embrace you and greet you with all our heart.

A thousand good wishes for the recovery of your very good mother and respects from us both.

Monquin, 28 February 1769

I am on my mountain, my dear Host, where my new establishment and my stomach make it painful to write, otherwise I would not have waited so long to ask you for frequent news of Madame Governor, until the full recovery for which in your penultimate letter the hope is joined with the desire.[245] For myself, my state has not worsened since arriving here; but I still suffer a great deal. I was remiss in not notifying you of the recovery of Madame Renou, who was bedridden for only a few days; but imagine what it was like for both of us at the same time to be almost at the extremity in a miserable inn.

There was no way to get the manuscript back from Fréron in which the discourse in question was printed; but I see, by what you tell me, that the secret copy was made prior to the corrections, which are nevertheless fairly old.[246] They do not prevent the work, thus corrected, from being miserable drivel; consider what [drivel] it must be in the condition in which they printed it. What is worse is that Rey and the others will not hesitate to insert it in this state in the collection of my writings. What can I do? None of this is my fault. In my situation, all that can be done when all the evils are without remedy is to remain tranquil and not torment myself about anything.

M. Séguier, celebrated for the *Plantae Veronenses* which perhaps you have or should have, is going to send me the plants which have put me back on my herbarium and my books.[247] I am now too rich not to feel the privation of what I lack. If among those which le Parolier promises you there is found the *great purple Gentian*, the *Thora valdenisum*,[248] the *Epimedium*, and some others, the whole well conserved and in flower, I assure you this present would give me the greatest pleasure; since I feel that despite everything, botany dominates me.[249] I will herborize, my dear Host, until death and beyond; because if there are flowers in the elysian fields I will make crowns of them for true, upright, just men, and such as I as-

suredly deserved to find on the earth. Good day, my very dear host; my stomach prevents me from finishing before morality[250] takes hold of me; since this would lead me astray. My heart follows you to the foot of the bed of your good mother; I embrace the good M. Jeannin.[251]

I do not see why you do not write me directly. My letters will arrive just as well addressed simply to *Bourgoin in Dauphiné*. Madame Renou wants me tell you also a thousand things for her in particular: but this should be understood, and I speak to you for her and myself. I do not know how I forgot to tell you that I finally had the consolation of receiving a letter from Mylord Marshal.

Letters from Abraham Gagnebin to Albrecht von Haller

1 March 1769[252]

. . . at the end of this week I will have five hundred dried Plants to send to M. Rousseau at Grenoble who devotes himself to Botany, he was here for ten days prior to his departure for France and England, I am doing this only at the behest of M. du Peyrou. . . .

12 April 1769

Here are three Plants that M. du Peyrou requests from me for M. Rousseau, namely, the great purple-flowered Gentian, the *Thora Valdensium*, and the *Epimedium*; I have seen the first on the Hasliberg, the Grimsula, and the St Gothard; it was in capsules all well conserved and in flower. If you have them, you would give me great pleasure in letting me know. . . .

Letters to Pierre-Alexandre Du Peyrou

Nevers, 21 July 1769

I would not have waited so long, my dear Host, to thank you for the book by M. Haller[253] and to acknowledge its receipt, but for my somewhat precipitous departure to convey my respects to my former host at Trye, while he felt himself reconciled with me.[254] After eight days' stay in this City, I plan to leave tomorrow for Lyon, and from there for Monquin, where I left Madame Renou, and where I expect to find your latest news, not having had any since your marriage, in whose happiness do not doubt, I hope, that your citizen takes a true and lively interest. I do not doubt that living in the country does not currently charm you as much as the one with whom you share it, and that you do not resume the same taste for herborization except to offer her better matched garlands. I would have liked to have been able to add to them the very pretty flowers that I found along my route; this lovely country, so little known by botanists, abounds in beautiful plants with which I would have enriched my herbarium had I thought to bring along a portfolio. I still cannot speak to you about the catalogue of M. Gagnebin to whom I have thus conveyed my thanks, nor about the Haller either, having only quickly looked over each one. I already have in my herbarium a large portion of the plants that the first contains, and concerning the other I find it printed with extreme negligence and full of unpardonable errors, which I understand to be printing errors. It will nonetheless always be precious for me for its own sake and because of the hand by which it came to me. Adieu, my dear Host. . . .

Monquin, 16 September 1769[255]

You had good reason, my dear host, to await the account of my herborization on Pila: because, among the pleasures of doing it, I was counting on that of describing it to you. But the first being absent leaves me with little to furnish to the other. I departed on foot with three Gentlemen of whom one is a Physician, who pretended to love Botany, and who desiring to cajole me, I do not know why, imagined that there was nothing better for this [purpose] than to fuss over me. Consider how this Turned

out, not only with my mood, but with the ease and the gaiety of walking journeys. They found me morose, I do believe; they do not say that it is they who made me such. It seems to me that despite the rain none of us were at all glum at Brot.[256] First point. The second is that we had bad weather during practically the entire trip, which is not pleasant when one wants only to herborize, and which, in the absence of a certain intimacy, one has as the only rallying point and resource. The third is that for sleeping we found a very bad hut on the mountain. Outside of one mattress stuffed with fleas, with which, as the Sancho of the troop, I was pompously honored, the bedding consisted of completely soaking wet straw reeking of moisture.[257] The fourth: the accidents of all kinds: one of our Gentlemen was bitten by a dog on the mountain. Sultan was half-massacred by another dog; he disappeared, I believed him dead from his wounds or eaten by a Wolf, and to my amazement upon my return here I found him calm and perfectly cured, how I cannot imagine, in the state in which he was, he could travel a dozen long leagues and especially cross the Rhône again, which is not a small river, as M. Chazeron said of the Rhine.[258] The fifth point, and the worst, is that we found almost nothing, having arrived too late for the flowers, too early for the seeds, and having no guide to help us find the good spots. In addition the mountain is extremely dreary, desolate, and barren and has nothing of the admirable variety of the mountains of Switzerland. If you had not become a layman, I would give you here an enumeration of our meager collection; I would speak to you of Meum, of bear's grape,[259] of doronicum, of bistort,[260] of Napellus,[261] of Thymelaea, etc. But I hope that when M. d'Escherny, who learned Botany in three days, is near you, he will explain all this. Among all the very common alpine plants, I found three more curious ones which gave me great pleasure. One is the Onagra (*œnothera biennis* L.), which I found on the shore of the Rhône, and which I had already found on my trip to Nevers on the shore of the Loire. The second is the blue sow thistle of the Alps (*sonchus Alpinus*)[262] which gave me so much more pleasure as I had trouble identifying it, persisting obstinantly in taking it for a lettuce; the third is the (*Lichen Islandicus*), which I recognized in the first place by the short hairs that surround the leaves.[263] I am boring you with my pedantic display, but if your Henrietta were to develop a taste for plants, how quickly my hay would transform itself into flowers! It would be necessary in that case, in spite of yourself, that you become a botanist.

I wanted to speak to you about your edifice and especially about your plantings: but I lack the paper, it is necessary to postpone the rest to another occasion.[264] On behalf of my wife and myself please convey the most

tender greetings to Madame du Peyrou and receive also those that we send you together.

N.B. My letter will not be sent for three days after its date.

Letters to Dr. Pierre Clappier[265]

Bourgoin, 23 December 1768

I am too aware, Monsieur, of your previous kindnesses and good-naturedness in the last instance in helping Liotard to label and perhaps collect the plants that he sent me, not to express my gratitude. Besides, I feel too much how it would be useful to me to have you as master in the leisurely but interesting study for which I am more and more impassioned, not to solicit your instructions a bit, only to the degree that it will not inconvenience you to grant them to me. I am, Sir, a poor sixtyish scholar, who to become a botanist lacks only youth, memory, vigor, observations, and a good method for presenting them. All the books in the world are not worth a good guide and do not substitute for one, because they are all written for disciples already educated by courses under professors or lecturers. For me, destitute of all human instruction and assistance, I said: I want to study plants and I took books, which, presuming knowledge which I did not have, could not lead me to the unknown except by the unknown, which is not the way to learn. It is by chance when, by tangled phrases, confused descriptions, or distorted figures, I am able to arrive at determining here or there the identity of some plant, whose uncertain synonymy is still another painful task when it is a matter of following the concordance of authors; without which, not knowing of which plant they wish to speak, under a name which is unknown to me, their observations are useless to me. If something had been able to aid me in surmounting the difficulty in learning, which increases for me year by year, it would have been to herborize some months with a good botanist, who would give me knowledge sufficient for acquiring the others by comparison. This is what I would have been too happy to do with you, if the occasion had offered itself and I had been more in a state to follow at least your feet; but no longer having either the vigor of your legs or that of your head, I would fear in such an instance that I would be a burden to you and that during your expeditions you would be annoyed in having to gear them to my strength. Thus, now that I am forced from henceforth to give up the mountains and am reduced to herborizing alone in the country around me or in my herbarium, I would be in a position to consult you at any time, if I troubled you about it as often as I would have need of it. But I would be

tempted to do still better for my instruction and that of the public; that would be to engage you, if possible, to give us a good book about botany, written not for students in medicine, all of whose work is cleared up by professors, but for the true botanophiles, who only have a taste for science, without having moreover the least attainment. The book of M. de la Tourette is very good, but it treats only common plants; it follows the systems of Tournefort and of Linnaeus, whereas we need an elementary system for beginning the study of plants prior to taking up the great systems of classifying them.[266] That of Linnaeus teaches better how to observe plants that one knows, but it does not teach how to know them. It is a system for masters; we need one for novices, and it is because it is necessary to be a great master oneself to find it that I propose the undertaking to you. If this idea made you smile, I could perhaps suggest to you some of those which relate to it, precisely on account of my ignorance, which makes me well aware of the difficulties that you should teach us to overcome. Forgive my babbling, Sir. I am a somewhat senile disciple. But I will have at least the simplicity of the true Botanist, if not the knowledge. *Valc, tuissimus*.[267]

Renou

Monquin, 17 April 1769

Permit me, Monsieur, to take the liberty of sending the enclosed Book to you on the assumption that it is perhaps not part of your collection. It is the *Synopsis* of Ray and Dillenius organized by doctor Hill according to the system of Linnaeus and marred in that these transpositions often abridge in a ridiculous manner the text of the former authors.[268] Nevertheless, as this work is often cited by Linnaeus and contains many observations that are not found elsewhere, I thought that in case you did not have it it could give you some pleasure, given that it is rare on the Continent.

This is the time to take up the study of plants again in the book which you recommend and which you read so well.[269] I will hold on to it during the herborizations which my health permits me to pursue and which my taste does not permit me to abandon; my memory, absolutely failing, makes the study of any other book useless, even the Philosophia botanica which, on your advice, I wanted to take up again and which I was compelled to abandon, due to an inability to retain anything.

One thing which would have been more useful to me would have been to follow you in one of your herborizations and to proceed on the heels of your discoveries, gleaning something here and there. If in his expeditions

Master Liotard by chance finds the great purple gentian, Epimedium in flower, Cortusa, soldanella, etc. I would be most obliged to him not to forget me. Forgive the liberty that I take, but I suppose you see him every day. Please accept my very humble greetings: I embrace you, Sir, with all my heart.

Renou

Monquin, 26 May 1769

I am, Sir, in a state of admiration before the beautiful plants that you had the goodness to send me and for which I thank you with all my heart. With the knowledge of how to distinguish them well you combine the art of conserving them well, and I approach neither the one nor the other. I had the *calceolus*,[270] I had the *uvularia*, but not in a state approaching the perfection of yours. I had also found in this country the *carex* that you say is not described by Linnaeus, and I have connected it to the *carex digitata* of the same Author, which you assure me it at any rate closely resembles, if it is not a variety. I have also found close to Gisors the *Gentiana pumila* of M. Gouan in fairly great abundance; but I did not take an interest in it, taking it merely for a variety of the small Centaury; it is perhaps for this reason that M. Linnaeus himself does not mention it.[271] At least I would not think that M. de Jussieu had reason to believe that this Author confused it with the *Gentiana filiformis*, to which it gives its true essential characters which could not accord with the other. I would doubt on the contrary that M. Gouan himself knew the *Gentiana filiformis* well, since he gives it (*Flora Monsp*: p. 469) a synonym of Magnol which does not fit it in any way, the *Gentiana filiformis* not being purple at all and hardly capable of being called branching, since, as the very good Sauvages says, it usually has only three flowers.[272] I will add that, by comparison with this small plant, the trivial name of *pumila* seems to suit the other badly, which is at least four or five times larger. Pardon, Sir, the impertinence with which I dare to make critical remarks in front of you, but it is to prove to you that I am not neglecting yours and that I study them as they deserve. Synonymy is the distressing part of Botany, and yet without which it is impossible for the observer to profit from the observations of others; a very necessary thing to the person who cannot see everything with his own eyes. Among the small number of Books on botany of which I am the possessor I lack the most necessary, I have only three of Linnaeus: but these sorts of Books are so expensive and so rare, especially in France where people cultivate botany very little, that after much vain searching to acquire

what I lack, I chose to dispense with them. Your lessons, Sir, can make up for many things and to the extent that you do not disdain to accord them to me I will not lose courage despite my small progress. I convey to you once again my thanksgiving and my most humble salutations.

Renou

I have not had the pleasure of seeing M. Faure,[273] who, in hurrying to depart, sent me the packet from Bourgoin.

My letter written, I received from Master Liotard a box bearing charges of eight pounds, twelve sous in postage: not being in a position to pay for the plants at this price, I sent the box back by post without opening it. Permit me, Sir, to beg you to alert Master Liotard not to send me anything more whatsoever, either by mail or by any other means: because he and I have such difficulty in understanding each other. When I say that he should not send anything, I mean plants; as for the notation of the price of the ornithogale, of what he sent me in the box which I returned and the fees for letters, he will oblige me to pass it on to me, so that I am settled up with him. I am sorry, Sir.

Monquin, 31 August 1769

Two trips that I made, Sir, one after the other delayed the thanks that I owe you and that I make to you with all my heart for your obliging and instructive letter of 30 June. In order not to dwell upon the same subjects I will not return to the insights that I derive from it about the gentians as well as about the Carexes; I limit myself to thanking you.

The second of these two excursions of which I was about to speak had for its sole purpose botany, for its destination mount Pila, and did not have the success which I had hoped from it, having taken place too late for the plants, too early for the seeds, the rain having always opposed us, and ignorance of the locale having caused us to roam about without knowing how to find the real plant habitats. On almost all the mountains we therefore found nothing but some ordinary plants; Meum, Bistort, Napellus, bear's Grape, Arnica, Doronic, Myrtil, yellow Balsam, Cacalia, the two digitalis, etc. One large plant alone gave me great pleasure. I took it at first for a blue-flowered lettuce: but, in examining it carefully, I believed I recognized it as the Sonchus alpinus; unfortunately the only specimen which I brought back is so spoiled by humidity that it is not even conservable. But in the final analysis it is always a new knowledge, and as I do not have the talent to make any, those which I pick up here and there always please

me very much. Another one for me is the *Œnothera biennis*, that we found near the Rhône and that I had already seen on my first trip along the Loire, on the small Islands formed by the sand; which makes me think, despite what the botanists say, that this plant is indigenous, while it would be hard to understand how *Erigeron canadense*[274] is found in profusion in the wildest places, despite its slight pappus, if it were not naturalized among us.

Here, Sir, is a kind of specimen such as one can put in a letter, of another plant that we found in the fields along our route and that I confess to you I did not know how to identify, as much because of my ignorance as because of my bad eyes. In such small flowers the analysis of the fructification certainly makes the study of plants impossible for people of my age.[275] It is for this reason among others that the study of the gramineae is my ruin, and that I cannot identify a quarter of those that I find on my path. Besides, the phrases of the *Species* are so meager, take so little the place of descriptions that, when, like myself, one has only these phrases as a guide, one is continually having difficulty finding one's bearings. All that I can say in hesitating about this plant is that it seems to me to correspond more to the *Silene mutabilis* than any other described in the same work.[276] I await, Sir, your response to my uncertainty in order to put it to rest.

I am always in the debt of Master Liotard, but it is really his fault if this debt is not paid off. It is not for me, but for him to fix the price of his trouble, and he must say what is his due so that as I wish he will be satisfied.

I beg you to accept, Sir, my reiterated gratitude for all your kindnesses and my very humble salutations together with my apologies for the importunities that I inflict on you from time to time.

Renou

I forgot to indicate to you, Sir, that the Poa rigida,[277] which you had the goodness to send to me in your preceding letter, was nowhere to be found.

In returning to the examination of the plant since I wrote my letter, it seems to me dioecious.[278] Would it be the *cucubalus otites*?[279]

Letters to Antoine Gouan[280]

Monquin, 6 October 1769

I see, Sir, that you have the kindness to concern yourself with me, much less than I need but much more than my ignorance deserves. I am very grateful for the research that you kindly undertook regarding the Ecphrasis of Columna, but I will not take advantage of the discovery you made about this book to acquire it to your detriment, having neither the capacity nor the desire to pay the price De Bure demands for it,[281] hence, Sir, do not let me keep you from making the acquisition, if that suits you. One of the things that disgusts me about botany is the enormous price of the books which treat it, and the necessity, nevertheless, of having all these books or the majority of them, especially when, never having taken a course or studied under any master, one is reduced to studying alone. I have been compelled for the same reason to go without the Hortus Cliffortianus, the amoenitates academicae, and many other books which would be equally necessary to me for supplementing the dryness of the Species with their descriptions and, by your leave, that of the Hortus Monsp:, and the Flora Monspel:[282] You have, Sirs, written only for the Learned; that is very good. But I have great need for books which teach the ignorant to become learned. For this there must be drawings and descriptions, and all this is found scattered in a library so voluminous and so ruinously expensive that what I have not being sufficient, I can see no alternative but to sell it in order to acquire the rest, or abandon it altogether.

I am very grateful, Sir, for the Present of your Ichtyologie which you made me and of whose price I am well aware; but I should warn you that you could not have chosen a more inept reader or one less able to understand you.[283] I refrain from wanting to make any excursion into the other branches of natural history, my old brain having already enough difficulty in retaining the very small provision of hay with which I try to nourish it. You will surely laugh, Sir, at your very undeserving dotard of a disciple, when you consult him about the umbelliferae which you question. Before your letter, I did not question the *selinum palustre*:[284] I now question it because you question it, and it is from you alone that I await a decision on this question. I see that in the illustration of Crantz there are several cauline leaves, there is only one in the specimen; in Crantz the radical

leaves are smaller that the cauline ones; in the specimen they are larger, M. Guettard says that the edge of the leaves is slightly notched, in the specimen it is not at all; he adds that the tip of the leaves is blunt, in the specimen it is not merely pointed, but sharp: this is all I can say very generally about this item,[285] it seems to me the issue could have been easily decided by the fresh plant, in seeing if it made milk [produced exudate]. With regard to the *seseli purenaeum*,[286] not having the honor of knowing it, I would not know how to speak except as a man blind to colors. Nevertheless the objection you yourself make about the drawing of the seeds seems very sound to me. M. Linnaeus speaks truthfully about a single leaf, as it is in the specimen, but the branch does not emerge from the axil as he says it does. He says again, and he even repeats it, that the involucel is longer than the umbellule and that is not to be found at all in the specimen. I see the pro and con everywhere and only know how to think as far as what you have decided for me. With regard to the *Athamanta lib*[*a*] *notis*[287] I have nothing at all to say because I did not find it in the herbarium, and I am certain that it was not there when I received it, because I immediately made the catalog in which it is not; likewise the *selinum carvifolia* of Crantz,[288] of which I have the illustration in his umbellifers, for which I find nothing similar in those [umbellifers] of the herbarium.[289] I am certain that I did not receive this herbarium such as it was arranged under your supervision; since independently of the umbelliferae, a family on which I dare not pronounce, so difficult does it seem to me, there is a great disorder and many false names among all the others, principally in the veronicas and the gramineae. I noticed that M. Dombey determined very easily and nevertheless was mistaken; this could not be otherwise at his age.[290] I am persuaded that he is already more circumspect today. His generous conduct and honesty well deserve my gratitude and my affection. When you have news of him, Sir, you will oblige me by conveying it to me.

You make me sense my ignorance and my misery very acutely with the notes about the umbellifers that you sent and of which I knew only one, besides from the single *selinum Carvifolia* (not that of Crantz but that of Linnaeus)[291], that I found at Trie two years ago, and of which I brought back one sole sample which I intended for my herbarium, but which I would gladly surrender to you if you do not have it and it would give you pleasure. This country, very poor in umbellifers, does not provide any of them that I know which correspond to your note except perhaps a small seseli, of which I encountered a sole plant a few days ago and which very much resembles the hippomarathrum if it were not that the involucel is polyphyllous.[292] This plant seems to me to be that which M. Haller de-

scribes in his most recent edition, no. 762, and which he wrongly equates it seems to me with the *seseli bienne* of Crantz.[293] I have very little sight, Sir; I am very lazy. I have never had the presumption to believe that I could find anything worthy of being offered to botanists of your stature, and I rarely even have the courage to gather anything for myself. My manner of herborizing is to wander randomly in the countryside, and to observe right and left the plants which strike me often even without uprooting them in order to dissect them; you see that this nonchalant manner of study should not make a beginner of sixty years very competent. The desire to make myself useful to you is capable of making me vigilant and industrious, although this is not, I assure you, an easy miracle to perform. I had not even thought of gathering seeds until a voyage to Pila, which I just undertook and where I only found the most common alpine plants, except for the *sonchus alpinus*, the *Proeanthes viminca*,[294] and the *lichen islandicus*, which I believed less common than the rest.[295] This country is humid, the Carexes are not lacking; hence I could provide you with this item next year. Give me your requests, Sir, perhaps the desire to deserve them will make me sufficiently bestir myself to put me in the mood to follow you. I have not had the honor, so far as I know, to see M. the vicomte de St. Priest.[296] Please allow me with all my heart to salute and embrace you Sir, with the simplicity and cordiality of a poor herborist.

Renou

Monquin, 26 December 1769

I have received, Sir, with much gratitude your Ichthyologie, which was sent to me by M. de la Tourette, and the plants, which you had the kindness to send me through a merchant. What can I, in my misery, return to you for these gifts, if it is not acts of thanks? I make them to you with all my heart, and in order not to return your portfolio completely empty, I have placed in it the bit of *carex* that I gathered in this country and which is made up of eight or six species. It is true that I could have collected more, but in my casual journeys, I like to observe on the ground and am too lazy for gathering.

I have added some other small plants, of which I suppose that the *specimina*, although imperfect and mutilated, could give you some pleasure, because I have not seen them in your Flore. 1st The *Lichen islandicus* which I brought from Pila, where it is abundant, although it appeared rare elsewhere; 2nd the *Linum radiola*, which I have not seen in this country, but which I found at Trye; 3rd the *Gentiana filiformis*, which I also found at Trye

and which I send you even though it is in your Appendix, because, from the synonym of Magnol which you gave to it and which does not suit it, I suspect that perhaps you do not have the true one, since the *Gentiana filiformis* is not branched, nor purple, but dichotomous and yellow, and its flower is so fleeting that it is extremely difficult to get; 4th the *Tricomanes tumbrigense*, the oddest and the rarest of all the capillaries.[297] I brought it from Wootton, where it grows on the roots of trees which come between the cracks of rocks in damp places. If you were very eager to have it with its seed capsules, I could detach one specimen for you from my mossarium, where I have two of them.

I am sending you these small atoms of plants, because I have learned that you have, as I do, near-sightedness, and this causes me to presume that just like me, the small plants give you more pleasure to observe than the large ones, on account of the difficulty of finding them and identifying them.

I have taken the liberty of adding to this a plant with a composite flower, which is perhaps quite common, but which I do not know at all and which I ask you to name for me. I found it last year in Savoy, on a mountain near Chambéry where it is not rare. It has the flower of a radiate and the leaves of a demi-floretted plant. Could it be an *arnica*? That is the genus which it seems most to resemble, but I find no *arnica* which resembles it. I found none sufficiently advanced to be able to examine the seeds; besides I have bad eyes, a bad magnifying glass, and extremely madadroit fingers. The analysis of the fructification tires me, repels me, exhausts me, and I become confused. I believe the methods of botanists very good for classifying plants already known; but I am persuaded that another method is necessary in order to study them, and here is what you others, savants, who write only for your kind, have not seen until now. Ray seems to me to have approached this elementary method more than anyone else; but he mocks us, when he includes the virtues of plants among the characters essential for knowing them. Your perfected secondary genera would really proceed toward this same end.

You ask, Sir, for umbellifers, and I am so unhappy that I cannot send you any. I have not one of those about which you sent the note, or those which I do have are unique in my herbarium and some even under a false title, such as the *Selinum palustre* of which you spoke to me, and which is certainly not the plant which is under this name in my herbarium. I had offered you the *Selinum carvifolia* (not that of Crantz, but that of Linnaeus);[298] but, as you say nothing to me about it and I have only one small specimen, I keep it, at least if you have some. I had a *Seseli* to send you, and it is precisely the one that you sent me yourself. It is true that yours has

perhaps more brilliance, on account of the first attacks of cold which have washed its blackish green with a fairly pretty purple. I do not doubt that both are the *Seseli* n° 762 of Haller. But although this one [Haller] gives it the synonym *Seseli bienne* of Crantz, I would doubt that this is it, given that Crantz cites the illustration of Vaillant, t.9. f.4, which does not resemble our plant at all. If it is *Seseli glaucum* Linn., it must be that another plant that I have under this name is not it, because it does not resemble it at all.[299]

I am not sending you the catalogue of my books of plants, because it is not yet finished, a friend asked me for first refusal to have the entirety, and I also do not want to break it down into detail. These sorts of collections, while small, lose much of their value in being incomplete, in view of the trouble required to assemble them. Besides, your shipments and your letters have reawakened my taste for botany a bit, and I feel that it will never be completely extinguished. I abandoned myself a bit too much to the distaste for pursuing this amusement that the honorable people who make what use they like of me with as much right as equity and generosity try to produce in me. It is clear that their plan is to make my life a burden, in taking away from me everything which could help me endure boredom, and it is enough to be their victim without being also their dupe, by cooperating with their noble intentions. I will continue therefore to herborize as much as possible and as long as it amuses me, and I feel that this will always amuse me, as long as you will not disdain to instruct me and to guide me in my small researches.

I salute you, Sir, and embrace you with my whole heart.

Renou

Letters to Marc-Antoine-Louis Claret de Latourette[300]

Monquin, 17 December 1769

I put off, Sir, for a few days letting you know I received the book you were good enough to send on behalf of M. Gouan and to thank you in order to free me previously of a shipment I had to send and to give me the pleasure of talking a bit longer with you.

I am not surprised that you have returned from Italy more satisfied with nature than with men; that is generally what happens to good observers, even in a climate where she [nature] is less beautiful. I know that one finds few thinkers in that country; but I would not at all agree that one only seeks there to satisfy one's eyes; I would add the ears.[301] Besides, when I learned of your trip, I feared, Sir, that the other parts of natural history would do some harm to botany and that you would bring back from that country more rarities for your cabinet than plants for your herbarium.[302] I presume from the tone of your letter that I am not too mistaken. Ah! Sir, you would do great harm to Botany to abandon it after having displayed it so well by the good you have already done, and by that which you can still do.

You make me perceive and deplore my misery, in asking me for an account of my herborization on Pila.[303] I went there in a bad season, in very bad weather, as you know, with very bad eyes, and with traveling companions still more ignorant than myself, and therefore devoid of resources to replace what I had at the Grande Chartreuse. I will add that there is no comparison to make, in my opinion, between the two herborizations, and that that of Pila seems to me as meager as that of the great Chartreuse is abundant and rich. I did not see one Astrantia, not one pyrola, not one soldanelle, not one umbellifer except meum, not one saxifraga, not one Gentian, not one legume, not one pretty Didynam except the large-flowered Melissa.[304] I admit also that we wandered without guides and without knowing where to look for the fertile places, and I am not surprised that given all the advantages that I lacked, you found riches on this dismal and wretched mountain that I missed. Be that as it may, I am sending you, Sir, the short list of what I saw, rather than of what I brought back, since the rain and my ineptitude caused almost everything that I had gathered to be

ruined and spoiled upon my arrival here. In all this there are but two or three plants which gave me great pleasure. I place at their head the ***sonchus alpinus***, a plant five feet tall, whose foliage and appearance are admirable, and whose large and beautiful blue flowers offer a magnificence that make it worthy of your garden. I would have liked, for all the world to have some of its seeds; but this was not possible, the sole stalk that we found was all newly in flowers; and, considering the size of the plant, and that it is extremely watery, I was barely able to save some half-rotted debris. As I found several other fairly pretty plants along the way, I added the note to them separately, so as not to confuse it with what I found on the mountain.[305] Concerning the particular designation of the locations, it is impossible for me to provide them to you; since, apart from the difficulty of doing it intelligibly, I do not remember myself; my poor eyesight and my absentmindedness result in my hardly ever knowing where I am; I am not able to manage orienting myself, and I always become lost when I am alone, as soon as I lose my visual bearings.

You remember, Sir, a small Galingale that we found in fairly great abundance near the Grande Chartreuse and which I initially believed was the cyperus fuscus, L. It is not that at all, and is not mentioned so far as I know either in the *Species*, or by any other Author of Botany, apart from Michelius whose phrase is: Cyperus radice repente, odorâ, locustis unciam longis et lineam latis. *Tab.* 31, *f.*1.[306] If you have, Sir, some more precise or more certain information about the above-mentioned galingale I would be very obliged if you would share it with me.

Botany becomes a very inconvenient and costly annoyance when one pursues it with so much passion, so that, in order to implement a reform I am tempted to get rid of my Books of plants. Nomenclature and Synonymy comprise an immense and painful study: when one wishes merely to observe, instruct, and amuse oneself with nature,[307] one does not need so many books. They are necessary perhaps to obtain some notion of the vegetal System, and to learn to observe; but, once one has had one's eyes opened, however ignorant one in other respects may be, one no longer needs books in order to see and admire without ceasing. For me, at least, in whom obstinacy has poorly compensated for my memory, and who has made very little progress, I feel nevertheless that with the grass of a backyard or a field I would have something with which to occupy myself the rest of my life, without ever being bored for one moment. Forgive, Sir, all this long prattling. The topic will make my excuse to you. Accept, I implore you, my very humble salutations.

Renou

Monquin, 26 January 1770

Poor blind men that we are!
Heaven, unmask the imposters
And force their barbarous hearts
To open to the gaze of men.

It is over, Sir, for me with botany; there is no question of it at all for the present and there is little probability that I will be in a position to return to it. Moreover, I am aging, I am no longer nimble for herborizing, and the infirmities which have left me fairly long respites threaten to make me pay for this relief. Henceforth, necessary journeys are enough for my strength, I should give up those for pleasure, or limit them to promenades which do not satisfy the avidity of a botanophile. But, in renouncing a charming study, which for me transformed itself into a passion, I am not giving up the advantages it has procured for me, and especially, Sir, that of cultivating your acquaintance and your kindnesses, for which I hope shortly to come thank you in person. It is to you that I must return all your exhortations to me concerning the enterprise of a Dictionary of botany, for which it is astonishing that those who cultivate this science so little sense the necessity. Your age, Sir, your talents, your knowledge give you the means to shape, direct, and execute this enterprise in a superior manner, and the applause with which your first essays were received by the public are guarantees of what a more considerable work would receive. For me, who is not in this study, in the same way as in many others, but a drivelling scholar, I thought, in herborizing, to distract and amuse myself rather than to instruct myself, and never had, in my belated observations, the foolish idea of teaching to the public what I myself did not know. Sir, I lived happily for forty years without writing books; I allowed myself to get dragged into this career late and despite myself: I left it just in time. If, after having left it, I do not rediscover the happiness which I enjoyed before entering it, I at least regain enough good sense to feel that I was never right there, and have no desire to return to it.

I confess nevertheless that the difficulties I have found in the study of plants have given me some ideas about the means to facilitate it and make it useful to others, in following the thread of the vegetal System by a method more gradual and less abstract than that of Tournefort and all his successors, without excepting Linnaeus himself. Perhaps my idea is not practicable. We will discuss it, if you wish, when I have the honor of seeing you. If you find it worthy of being adopted, and it tempts you to undertake the principles of botany according to this plan, I would believe I have done more in inspiring you to this work, than if I had undertaken it myself.

I owe you thanks, Sir, for the plants you had the kindness to send to me in your letter; and even more for the explanations with which you accompanied them. The papyrus gave me great pleasure, and I placed it very preciously in my herbarium. Your Antirrhinum purpureum[308] proved to me that mine was not the true one although it resembles it very much; I am inclined to believe with you that it is a variety of arvense[309] and I admit to you that I found several in the Species whose phrases do not Suffice to give me clearly the specific differences. Here, it seems to me, is a defect that the method I imagine would never have, because one would always have a fixed and real object for comparison, on the basis of which one could easily assign differences.

Among the plants of which I earlier sent you a list, I omitted one for which Linnaeus does not indicate the country of origin, and which I found at Pila, it is the rubia peregrina; I do not know if you also noticed it; it is not completely rare in the Savoy and the Dauphiné.

I am here in a great perplexity concerning the transportation of my luggage, consisting, in large part, of Botanical paraphernalia. I have especially in scattered papers a large number of dried plants in fairly bad order, and common for the most part, but among which nevertheless thare are some more unusual ones, but I have neither the time nor the strength to sort them, since this work henceforth will be useless to me. Before throwing this entire debris of old papers on the fire, I wanted to take the liberty of speaking to you just in case, and if you were tempted to examine this hay which truly is not worth the trouble, I could make a bundle which would come to you via M. Pasquet,[310] because I do not know how I will take all this with me, or what to do with it. I believe I remember for example that there were some ferns, among others the *Polypodium fragrans*,[311] which I found in England, and which is not common everywhere. If examining my herbarium and my books on botany might entertain you even a few moments, the entirety could be deposited with you and you could look through it at your leisure. I do not doubt that you have the majority of my books. Nevertheless it is possible to find an English author such as Parkinson and the corrected Gerard which you perhaps do not have.[312] The Valerius Cordus is fairly rare; I also had *Tragus*, but I gave it to M. Clappier.[313]

I am surprised to have had no news of M. Gouan, to whom I send this country's carices* which he seemed to desire, and some other small plants, the whole to the address of M. de Saint-Priest, which he had given me. Perhaps the packet did not reach him; that is what I did not know how to

*I recall having substituted one name for another by mistake, *Carex Vulpina* for *Carex Leporina*.[314]

verify, given that not one word of truth penetrates the edifice of shadows that has been erected around me. Happily the works of men are perishable like themselves, but truth is eternal: post tenebras lux.[315]

Please accept, Sir, my most sincere salutations.

Monquin, 22 February 1770[316]

It is with regret that I see the moment to visit you being put off, because of my own state and the bad weather. I hope nonetheless not to delay too much longer. If I had a few seeds that were worth the trouble of being presented to you, I would resolve to send them to you in advance so as not to miss the time for planting them, but I have a mere trifle and I added it to the plants from Pila in a shipment that I sent some months ago to Madame the Duchess of Portland and which was not more fortunate according to all appearances than that which I sent to M. Gouan, since I have had no news of either the one or the other. Since the one for the Duchess of Portland was more considerable and I put more time and care into it, I regret it all the more; but I must learn to console myself about everything. I have nevertheless some seeds of a very beautiful seseli of this country that I call seseli Halleri, because I cannot find it in Linnaeus. I also have an American plant which I have planted in this country with other seeds that I have been given, and which alone succeeded. It is called Gumbo in the Islands and I found that it is Hibiscus esculentus, it has grown well-flowered, and I have taken some very ripe seeds out of a capsule, which I will bring you with the seseli, if you do not have them.[317] As one of these plants is from the hot countries and the other seeds fairly late in our countryside, I presume that there is no hurry in planting them in the earth, without which I will decide to send them to you.

Your *Galium rotundifolium*, Sir, is indeed in my opinion the same, although it should have a white flower, and yours has a yellow one; but since in drying many flowers turn yellow, I think that these are in the same condition. It is definitely not my Rubia peregrina, a much larger plant, more rigid, more acrid, and having the consistency of ordinary Madder; in addition I am certain I have seen the berries that your Galium does not have, and which are the generic character of the Rubias. Nevertheless I am, I confess, not able to send you a sample. Here, on top of that, is my story.

I have often seen in Savoy and in Dauphiné the wild Madder, and I took some samples. Last year at Pila I saw it again; but it seemed different from the others, and it seemed to me that I put a specimen in my portfolio.

Since my return, I read by chance in the article Rubia peregrina that its leaf has no vein above; I remembered or believed I remembered that my Rubia from Pila had none either. I concluded therefore that it was the *Rubia peregrina*; in mulling over this idea I just concluded the same thing about the other madders that I had found in these areas, because they usually have only four leaves; for this conclusion to have been reasonable, it would have been necessary to search for plants and verify it; this is what my laziness prevents me from doing, in view of the disorder of my old papers and the time I would have had to put into this research. Since the receipt, Sir, of your letter, I have put more than eight days into going through all my books and papers one after another, without being able to find my plant from Pila which I perhaps threw away with everything that arrived spoiled. I found some of the others; but I had the mortification of finding the vein well marked there, which disabused me about these at least. Yet my memory, which so often deceives me, so nicely retraces that [herborization] of Pila, that I still have difficulty in letting go, and I do not despair that it will not turn up in my papers or in my books. However that may be, imagine in the attached sample the leaves a bit broader and without a vein; that is my plant from Pila.

Someone of my acquaintance wanted to acquire my books on botany in their entirety, and even requests first refusal on them, hence I do not take advantage of this matter of your obliging offers. As for the scattered forage in these rags, since you do not disdain to go through them, I will give them to M. Pasquet.[318] But first I must go through and empty those books in which I have the bad habit of cramming the plants I am carrying in making my way, because then it is soon done. In this fashion I found the secret of ruining almost all my books, and losing almost all my plants, because they fall out and disintegrate without my paying attention, while I leaf through and peruse the book, occupied solely with what I am searching.

I beg you, Sir, to convey my gratitude and my salutations to Monsieur your brother.[319] Persuaded of his kindnesses and of yours, I will gladly take advantage of your offers on occasion. I finish, without further ado in saluting you, Sir, with all my heart.

Monquin, 16 March 1770

Here, Sir, are my miserable *herbailles*[320] where I fear you will find nothing which merits being collected if not that plant which you gave me yourself of which I have doubles of some, and of which I have not had the time

to take the same advantage as the others, after having placed several in my herbarium. I suggest you put the whole on the fire. Nevertheless, if you have the patience to leaf through this rubbish, you will find there, I believe, some plant that an obliging Officer had the kindness to bring me from Corsica, and which I did not know.

Here also are some seeds of the seseli Halleri. There are few, and I gathered them only with great difficulty, because it seeds very late and matures with difficulty in this country: But it becomes, in return a very beautiful plant, as much for its lovely appearance as for the tint of purple that the first hints of frost give to its umbels and stems. I also venture to include some gumbo seeds, although you did not say anything about it, and that perhaps you have or do not care about, and some seeds of Heptaphyllon that people never think to collect, and which perhaps does not come up in gardens, since I do not recall ever having seen it there.

Pardon, Sir, the extreme haste with which I write you these two words, and which made me forget to thank you for the asperula Taurina, which gave me great pleasure. If our roads were passable for coaches, I would already be with you. I will bring you the catalogue of my books; we will list which ones could be useful to you and if the purchaser wants to back out, I will arrange to procure them for you. I do not ask better, Sir, I assure you, than to cultivate your kindnesses, and if I ever have the happiness to be a bit better known to you than to Monsieur your brother, who claims to know me so well, I hope that you will not find me undeserving. I salute you with all my heart.

Do you have the Dianthus Superbus? I am sending it to you in any case. It is really a very beautiful pink, and has a very sweet, if weak, odor. I was able to gather some of the seed fairly easily because it grows abundantly in a field underneath my windows. It should be permitted only to the Horses of the sun god to eat such hay.[321]

4 July 1770

I wanted, Sir, to give you an account of my voyage upon arriving in Paris: but it took several days for me to get settled, and to make myself once again au courant with my old acquaintances. Fatigued by a voyage of two days, I stayed for three or four at Dijon whence for the same reason I went to make a similar sojourn at Auxerre, after having had the pleasure of seeing in passing M. de Buffon[322] who gave me the most obliging reception. I saw also at Montbard M. d'Aubenton the subdelegate,[323] who after an hour or two of walking together in the garden said to me that I have

already the beginnings and that in continuing to work I could become something of a botanist. But the following day having gone to see him before my departure, I looked over his tree nursery with him despite the rain which inconvenienced us greatly, and knowing almost nothing there, I refuted so well the good opinion that he had of me the previous day that he retracted his praise and said nothing more to me at all. Despite this poor success, I have not neglected to herborize a bit during my journey and to find myself in familiar country in the countryside and the woods. In almost all of Burgundy I have seen the earth covered right and left with this same tall yellow Gentian that I was not able to find at Pilat. The fields between Montbard and Chably are full of *Bulbocastanum*;[324] but the bulb is much more bitter than in England and almost inedible; the *Œnanthe fistulosa* and the pasque flower (pulsatilla) are also there in quantity: But not having traversed the forest of Fontainbleau except in great haste, I have seen nothing there at all remarkable, but the *Geranium grandiflorum* which I found underfoot by chance one time only.[325]

I went yesterday to see M. d'Aubenton at the jardin du Roy,[326] I encountered there while walking M. Richard gardener of the Trianon with whom I tried as you can well imagine, to make acquaintance.[327] He promised to show me his garden which is much richer than that of the King at Paris; hence I am on the verge of making in one and in the other some acquaintance with exotic plants, about which as you have been able to see, I am perfectly ignorant. I will take some time for seeing the Trianon more at my leisure when the Court is not at Versailles, and I will try to furnish myself double with everything that they will permit me to take, in order to be able to send what you have not been able to have. I have also seen the garden of M. Cochin which seemed to me very nice; but in the absence of the master I did not dare to touch anything.[328] I am, since my arrival, so overwhelmed with visits and dinners, that if this lasts it is impossible that I should hold out, and unfortunately I lack the strength to defend myself. Nevertheless if I do not quickly take another course of life my stomach and my botany are in great peril. All this is not the way to take up again the copying of Music in a very lucrative fashion, and I fear that by dint of dining in town I will finish by dying of hunger at home. My wounded soul needs some dissipation, I feel it: but I fear not being able to regulate the amount here, and I would like still better to be entirely in myself than completely outside myself. I have not found, Sir, any society better tempered and which suited me more than yours, no place of reception more according to my hear than that which under your auspices I received from the charming Melanie. If it was given to me to choose a uniform and pleasant life, I would want all the days of mine to pass the morning in work,

either at my copying or on my herbarium; To dine with you and Melanie, then to nourish my ear and my heart for an hour or two with the sounds of her voice and those of her harp, then to walk in private conversation with you the rest of day in herborizing and philosophizing according to our fancy. Lyon left me regrets which will bring me near again some day perhaps. If this happens to me you will not be forgotten, Sir, in my projects; should you contribute to their execution. I am vexed to not know the address of Monsieur your brother here.[329] If he is still there I would not have waited so long to go see him, recall me to his remembrance, and ask him to remember me kindly sometimes to yours and that of xxx.[330]

If my paper were not finishing if the post were not going to depart, I would not know to finish myself. My chatter is not better ordered on paper than in conversation. Be so kind as to tolerate one as you tolerate the other. *Vale, et me ama*.[331]

JJ Rousseau

Do not give my address to anyone so that I am not overwhelmed with letters.

Poor blind men that we are!
Heaven unmask the imposters
And force their barbarous hearts
To open to the gaze of men

Paris, 28 September 1770

I do not wish, Sir to accuse myself of faults after having repaired them, but the bad weather and the season which changes for the worse punishes me for having neglected the Jardin du Roy while it was nice, and makes it impossible for me to provide an account to you for the *plantago uniflora*[332] and the other unusual plants of which I would have been able to speak to you if I had known better to profit from the kindnesses of M. de Jussieu. I do not despair nonetheless of some nice day in autumn for making this pilgrimage and for going to receive for this year the farewells of syngenesia;[333] but in awaiting this moment, permit me, Sir, to take this one in order to thank you if late for the continuation of your kindnesses and your letters which always give me the truest pleasure although I am not very punctual in replying. . . .[334]

26 November 1770

I almost do not know, Sir, how to dare to write after having waited so long to thank you for the treasure of dry plants that you had the kindness

to send me in the last instance. Not having yet had the time to place them I have not examined them very much but I see from the country [from which they come] that they are beautiful and good. I do not doubt that they are well named and that all the observations that you ask me for are not reduced to approbations. This shipment will put me, I hope, somewhat in the pursuit of botany that other cares have made me extremely neglect since my arrival here, and the desire to attest to you my very helpless but very sincere gratitude with time will furnish me perhaps something to send you. For the present I present myself completely empty not having the seed about which you sent me the note except for the one Doronicum pardalianches which I believe I have already given you, and of which I send you my miserable remains. If I had been informed when I went to Pila last year I would have been able to bring you easily a litron[335] of seeds of Prenanthes purpurea, and there are some others like the Tamus, and the perfoliate Gentian that you ought to be able to find easily around you. I have not forgotten the plantago monanthos,[336] but they could not give it to me at the Jardin du Roy where there is only a sole stalk without flower and without fruit; I have since recovered a small ugly specimen that I will send you with some other thing if I do not find better; but as it grows in abundance around the pond of Montmorency I count on going herborizing there next spring and on sending you if possible plants and seeds. Since I have been at Paris I have still been only three or four times at the jardin du Roy and even though they have gladly given me samples of plants, I assure you that I have not been able to embolden myself to ask for seeds. If I come there, this is in order to serve you if I have the will but this cannot come all at once. I have spoken to M. de Jussieu of the papyrus that you brought back from Naples; he doubts that it is the true paper Nilotica.[337] If you could send him either plant or seeds, either through me or through others I saw that this would give him great pleasure, and this would be perhaps an excellent means to obtain from him many things if then we would have the good grace to ask, Although I know well by experience that he is charmed to oblige free of charge: But I need something to embolden me when it is necessary to ask.

I forward with this letter to Messieurs Boy de la Tour a Box containing a spider crab which comes from very far, because it was sent to me from the gulf of Mexico. Since nevertheless this is not a very rare piece and it was very damaged in the crossing I hesitated to send it to you; but they said that it can be restored and find a place still in a cabinet; this assumed, I ask you to give it one in yours, in consideration of a man who will be very sincerely attached to you all his life. I have placed in the same box the two or three seeds of Doronic and others that I have at hand. I count on next summer to put myself au courant with botany in order to try to put a bit of

my own [contribution] into a correspondence which is precious to me and from which I alone have had all the profit until now. I fear having pushed thoughtlessness to the point of not having thanked you for the acquaintance of M. Robinet[338] and the courtesies with which he has overwhelmed me. I have also allowed M. de Fleurieu to leave from here without going to render him my respects as I owe him and want to do. My will, Sir, will never be wrong toward you and yours; but my negligence often causes me to commit some really inexcusable acts that I ask you every time to excuse in your forgiveness. My wife has been very grateful for the honor of your remembrance and we ask you one and the other to accept our very humble greetings.

25 January 1772

I have received your news, Sir, with great pleasure, the testaments to your remembrance and the details of your interesting occupations. But you speak to me of a shipment of plants from M. the Abbé Rozier[339] that I have not received. I remember well having received some plants on your behalf, and having thanked you if a bit late, before your trip to Paris; but since your return to Lyon, your letter was your first sign of life for me, and I was much more charmed by it than I had almost ceased to expect.

In learning of the changes that have occurred at Lyon,[340] I had predicted so well that you would see yourself as freed from a hard enslavement, and that relieved of obligation, certainly respectable, but that a man of taste will rank with difficulty among his pleasures, you would savor a very lively pleasure in delivering yourself entirely to the study of nature, on which I had resolved to congratulate you. I am very happy with being able at least to carry out after the fact and on your own account a resolution which my laziness did not allow me to carry out in advance, although I was very certain that this congratulation would not be inappropriate.

The details of your herborizations and your discoveries made my heart beat with joy. It seemed to me that I was in your party, and that I shared your pleasures; These pleasures were so pure, so sweet that if few men know how to enjoy them, and among those few even fewer are worthy, since I see with as much surprise as sorrow that botany itself is not exempt from the jealousies of these covert and cruel hatreds which poison and dishonor all the other sorts of study. Do not suspect me, Sir, of having abandoned this delightful taste; it casts an always new charm on my solitary life. I deliver myself up to it alone, without success, without progress, almost without communication, but each day more convinced that the

leisure times devoted to the contemplation of nature are the moments of life when one most delightfully enjoys oneself. I confess nevertheless that since your departure I have added a small object of amour-propre, to amuse my idleness innocently and agreeably. Some foreign fruits, some seeds which by accident fell into my hands inspired in me the whim of beginning a very small collection of this kind. I say begin, because I would be very annoyed to finish it if the thing were possible, not being unaware that when one is poor one feels only the pleasure of acquisition, and when one is rich on the contrary one feels only the privation of what we lack and the anxiety inseparable from the desire to complete what one has. You must have been in this anxiety for a long time, you, Sir, whose rich collection gathers in a small space almost all the productions of nature, and proves by its pretty arrangement how much M. the Abbé Rozier[341] had reason to say that it is the work of choice and not of chance. For myself who proceeds only gropingly into a small corner of this immense labyrinth, I gather all that falls into my hands fortuitously and preciously, and not only do I accept with ardor and gratitude the plants that you gladly wish to offer me: but if you find with this some superfluous and rejected fruits or seeds with which you would really like to enrich me, I would make them the glory of my small nascent collection. I am embarrassed not to be able in my misery to offer you anything in exchange at least for the moment. For, although I have gathered some plants since my arrival in Paris, my negligence and the humidity of the room which I initially inhabited have left everything to rot. Perhaps I will be happier this year, having resolved to employ more care in the drying of my plants, and especially to glue them down as they dry; a means which seemed best to me in order to conserve them. Having conducted a fruitless search, I would be ungracious to show off to you an herborization that I undertook at Montmorency last summer with the Crowd[342] from the Jardin du Roi; But it is certain that on my part it was an enterprise only for finding the plantago monanthos, which I had the grief to look for in vain.[343] M. de Jussieu the younger whom you undoubtedly saw at Lyon will have been able to tell you with what ardor I begged all these Gentlemen, as soon as we approached the end of the pond to assist me in the search for this plant; which they did, and among others M. Touin[344] with a kindness and a solicitude which would merit a better success. We found nothing, and after two hours of useless searching, in the heat of the day and on the hottest day of the year, we stopped to breathe and rest under the trees which were not far, concluding unanimously that the Plantago uniflora indicated by Tournefort and M. de Jussieu in the neighborhood of the pond of Montmorenci had absolutely disappeared. The herborization otherwise was

fairly rich in common plants, but all that is worth the trouble of being mentioned is reduced to the royal Fern, the Lythrum hyssopifolia, the Lysimachia tenella, the Peplis portula, The Drosera rotundifolia, The Cyperus fuscus, The Schoenus nigricans, and the hydrocotyle, growing with some small and rare leaves without any flower.[345]

There is no paper for me to prolong my letter. I do not speak of myself, Because I have nothing new to tell you, and because I take no interest anymore in what is said, published, printed, invented, assured, and proved about what they, my contemporaries, claim to be the imaginary and fantastic being to which it pleases them to give my name. Thus I finish my chatter with my sheet of paper, asking you to excuse the disorder and the scribbling of a man who has lost all habit of writing and who takes it up almost only for you. I greet you, Sir, with my whole heart and ask you not to forget to remember me to Monsieur and Madame de Fleurieu.

JJR

Paris, 7 January 1773

Your second letter, Sir, made me feel very keenly the fault of having waited so long to respond to the preceding one and to thank you for the plants which accompanied it. It is not that I have not been aware of your recollection and your parcel; but the necessity of leading a life that is too sedentary and the lack of habit in writing letters daily increase the difficulty, and I feel that it will be necessary to renounce the entire epistolary exchange soon even with persons who like you, Sir, have always been instructive and agreeable to me.

My principal occupation and the diminution of my strength have reduced my taste for botany to the point that I fear losing it entirely. Your letters and your parcels are very suited for reanimating this taste. The return of good weather will contribute to it perhaps; but I doubt that in any weather my laziness will accommodate itself for very long to the whim of making collections. The one of seeds made by M. Touin had excited my emulation, I had been tempted to gather in a small collection as many different seeds and fruits either indigenous or exotic that could come into my hands; I made many excursions in this intention. I returned with fairly reasonable harvests, and many obliging persons having contributed to increasing them, I soon felt in my poverty the embarrassment of riches, for although I do not have in toto a thousand species, dread seized me in trying to arrange all this and besides the space is lacking for me to put it in some kind of order. I have almost renounced this enterprise and I have

packets of seeds which were sent to me from England and elsewhere fairly long ago, without my having yet been tempted to open them. Thus unless this whim revives, it is for the present more or less extinguished.

Whatever happens to this abated taste There will always remain for me the pleasant memories of country walks in which I had the honor of following you and of which botany was the subject; and if, of all this, there remains to me some part of your benevolence, I will not think I have cultivated botany without profit, even when it will have lost its attractions for me. Regarding the admiration for me of which you speak, merited or not, I do not thank you because it is a sentiment which has never flattered my heart. I promised M. de Chateaubourg[346] that I would thank you for having procured for me the pleasure of learning your news through him, and I acquit myself of my promise with pleasure. My wife is very grateful for the honor of your remembrance, and we both beseech you, Sir, to accept our thanks and our greetings.

JJRousseau

Letters to Chrétien-Guillaume de Lamoignon de Malesherbes[347]

Paris, 21 October 1771

Here, Sir, are the plants that belong to you and that I would have taken less time to deliver had I encountered fewer difficulties.[348] Since they were cut in the rain and kept in a damp room, I have substituted some others in a less damaged state for a portion that was spoiled. Experience having taught me that large herbaria are more inconvenient than useful, I have reduced this sample to a more portable form; I hope, sir, that it will entertain you for a moment. I have learned that your health was unsettled; I send you sincere wishes for its prompt and perfect restoration, and I beg you, sir, to accept my very humble salutations.

JJ Rousseau

Paris, 11 November 1771

I would, sir, be very mortified if you were to deprive me of the pleasure with which you have flattered me of occupying me with a responsibility that could be agreeable to you and to prepare plants to complete your herbaria. Despite the pleasure this could have given me, I have never thought to offer you the use of my time free of charge, not being able to subsist without the aid of my labor. I even admit to you that I would have very much desired to intermingle the sedentary and boring work of my copying with an occupation more to my taste and better for my health in working on herbaria for so many cabinets of natural history made in Paris, where in my view this third realm [of plants] that counted for nothing is no less necessary than the others. To make several herbaria at one time would have been more lucrative and would have better compensated for the small expenses that extended journeys and the access to curious gardens[349] sometimes require. But the French in general have false ideas about botany and so little taste for the study of nature that it is not to be hoped that this charming part [of it] ever tempts them to make collections of this kind; hence I give up this resource. For you, sir, who unites knowledge of all sorts with the passion to augment it unceasingly, do not deprive me of the pleasure of contributing to your amusements. Send me a list of

what you desire; I will gather as much of it as possible, and I will receive without any objection the payment for what I will have furnished you. With regard to the small sample that I sent you, that is something else entirely; those were plants which belonged to you. Those I substituted for the spoiled ones were not gathered for you. I took no other trouble than to extract it from what I had gathered for myself, and as I did not offer to contribute to the expense that the herborization I made following you[r rentinue] cost you, it seems to me, Sir, that you should offer me payment neither for what we gathered together nor for the small arrangement that it amused me to put together to send to you.

In spite of the good report you gave about your present health, I am assured that it is not yet perfectly restored, and unfortunately the season we are entering does not favor the pedestrian exercise I believe to be as good for you as for me. Winter also has, as you know, sir, the herborizations that are suited to it, that is the mosses and lichens. In your parks there should be unusual things of this kind, and I strongly encourage you when the weather permits to go examine this realm on site and in its season.

Your resolutions, sir, being such as you represent them, I am certainly not the man to disapprove them; this is to procure very agreeable pastimes very honorably. To fulfill important duties in high places is the task of men of your estate and your talents, but when after having offered to one's country the tribute of one's zeal one sees it to be useless, it is permitted in that case to live for oneself and to content oneself with being happy.

JJ Rousseau

Paris, 19 December 1771

Here, Sir, are some moss samples that I gathered in haste in order to put you in a position at least to distinguish the principal genera before the season for observing them is past. This is a study in which I delightfully employed the winter I passed at Wootton, where I found myself surrounded by mountains, woods, and rocks covered with maidenhair and the most curious mosses. But, since then I have so fully lost sight of this family that my exhausted memory furnishes almost nothing about what I learned of this genus; and not having the work of Dillenius, an indispensable guide in these researches, I could determine the species I am sending you only with great effort and often only with uncertainty.[350] The more I persisted in overcoming the difficulties by myself and without anyone's assistance, the more I confirmed myself in the opinion that botany, such as it is cultivated, is a science which is acquired only by tradition; one shows the plant; one names it, its shape and its name inscribe themselves together in

the memory. There is little difficulty in thus retaining the nomenclature of a large number of Plants; but, when one believes oneself on this account to be a Botanist, one deceives oneself; one is merely an herborist; and when it is a matter of determining by oneself plants that one has never seen and without guide, this is when one finds oneself stopped short and when one reaches the limit of one's doctrine. I have remained even more ignorant in taking the opposite route. Always alone and without any other master but nature, I have put in unbelievable efforts in return for very slight progress. By hard work I have succeeded at being able just about to determine the genera, but for the species, whose differences are often very little marked by nature, and more poorly stated by the authors, I have been able to distinguish only a very small number with certainty, especially in the moss family, and especially in the difficult genera, such as the hypnums, the Jungermannias, the Lichens.[351] I believe nevertheless that I am certain with one or two exceptions of those I am sending you that I have designated by a question mark, so that you can verify in Vaillant and Dillenius whether I am mistaken or not.[352] Be that as it may, I believe it is necessary to begin by knowing empirically a certain number of species in order to be able to determine the others, and I believe that those I am sending you can suffice, in studying them well, to familiarize you with the family and to distinguish at first glance at least the genera by the *facies* characteristic of each of them. But there is another difficulty; this is that the mosses thus displayed as shoots do not at all look the same on paper as they do assembled in thick tufts of grass on the earth. Thus one herborizes uselessly in an herbarium and especially in a mossarium if one has not started by herborizing on the earth.[353] These sorts of collections should serve only to facilitate recollecting, but not for first instruction. I doubt, however, Sir, that you would easily find the time and the patience to weigh yourself down with the examination of each tuft of grass or moss that you will find on your path. But here is the means by which it seems to me you could obtain for successful analysis all the vegetal productions of your environs, without boring yourself with the minute details unbearable for minds accustomed to generalize ideas and always to regard objects on a large scale. It would be necessary to inspire some taste for the study of plants in one of your lackeys, a Watchman, or garden boy, and to take him along on one of your walks, have him gather the plants that you do not know, particularly the mosses and grasses, two difficult and numerous families. It would be necessary that he try to take them in the flowering condition when the determining characteristics are the most marked. In taking two examples of each, he would put one aside to send to me, under the same number as its like which would remain with you, and on which you would afterwards

place the name of the plant when I send it to you. You would thus avoid the work of determination and this work would only be a pleasure for me, who is in the habit and devoted to it with a passion.[354] It seems to me, Sir, this manner would give you in a short time a summary of the vegetal productions of your lands and their environs, and which, giving yourself over to the pleasure of observing without fatigue, you would still be able, by means of an assured nomenclature to have the pleasure of comparing your observations with those of the authors. Nevertheless I do not undertake to determine everything. But the long habit of rummaging through the countryside has made me familiar with the majority of indigenous plants. It is only in gardens and among exotic productions where I find myself in unkown territory. Finally what I am unable to determine will be for you, Sir, an object of research and curiosity which will make your pastimes more piquant. If this arrangement pleases you, I am at your disposal, and you can be sure of providing me a very interesting amusement.

I am awaiting the note that you have promised me in order to stock it [the herbarium] as much as depends on me. The occupation of working on herbaria will very agreeably fill the beautiful days of summer. Nonetheless I do not ever expect to be rich in foreign plants; and, in my view, the greatest charm of botany is to be able to study and know the nature around one rather than in the Indies. I have been nevertheless quite happy to have been able to insert some curious plants in the small collection that I have the honor of sending you, and among other things the real papyrus which until now has not been known at all in France, not even by M. de Jussieu.[355] It is true that I was not able to send you more than a quite miserable sample, but that is enough for distinguishing this rare and precious galingale. This is enough chattering; but botany carries me away and I have the pleasure of speaking about it with you: grant me, Sir, a bit of indulgence.

I am only sending you old mosses: I searched in vain for new ones in the countryside. There were hardly any except in the month of February, because Autumn was too dry; once more it will be necessary to search far and wide. Around Paris one finds hardly anything but the same things.

Paris, 19 January 1772

Profiting, Sir, from your obliging offer, I went to your library; there I looked through the books on botany which fell into my hands: I took note of the majority and I carried away the four listed below, all small in quarto:

1. Pontedera Anthologie, etc.[356]
2. Camerarius Hortus medicus.[357]
3. Flora Prussica.[358]
4. Gesner de Lunariis.[359]

I must not have found all the locations for all the books on Botany, because I searched in vain for Cesalpino, Columna, and Morisson, although I am quite certain that in a library as well composed as yours, these books could not have been omitted.[360] Among those that I did find there are some too heavy to transport and which would cause me even some encumbrance in the confines of my lodging. As I doubt, sir, that this letter will find you still at Malesherbes, I will reply in detail to your other points after your return, and I limit myself here to wishing you a good trip and to pray you, sir, to accept my respect.

Spring [17 April] 1772

If I waited so long, Sir, to respond in detail to the letter you had the kindness to write me on 3 January, it was at first in the thought of the trip of which you had apprised me, and I only learned afterwards that you had given up, and then by reason of my variable work, which has come to me all of a sudden in such great abundance that, in order for me not to put off anyone, I was obliged to give myself up to it entirely; this caused a diversion from botany of several months. But finally the season has returned, and I am preparing to recommence the country outings that have become, by long habit, necessary to my disposition and my health.

In glancing through the dried plants that I have left to me, except my herbarium, which I do not wish to touch, I found but little, only some duplicates of what you have already received; and this not being worth the trouble of being brought together for a first shipment, I would find it convenient this summer to find supplies [of specimens] to prepare, attach, and arrange them during the winter; and not to deliver until a year from now what I would then have put together after which I could continue the same, year after year [for] the people for whom I had begun the herbaria, until I exhausted everything I could provide. If this arrangement suits you, Sir, I will conform to it with exactitude; and I will commence my collections starting now. I desire only to know which form and size is preferred. My idea would be to make the basis of each herbarium on letter paper such as this; this is how I started one for my own use, and each day I sense more that the convenience of this format compensates amply for the advantages that the larger herbaria have. The paper on which are the

plants I sent you should have been still better, but I could not find the same [paper as before], and the tax on papers has so undermined their manufacture, that I could not find any more [paper] for writing that does not tear. I also have a project for a form of small herbaria for plants in miniature to put in the pocket, which are not the least unusual, and I will put only plants in there which will remain completely whole, root and all; among others, the majority of the mosses, Milkworts, Purslane, Montia, Sagina, White or Meadow saxifrage, etc. It seems to me that these dainty herbaria could be charming and valuable at the same time. Finally there are plants of a certain size which cannot conserve their appearance in a small space, and specimens so perfect that it would be a shame to mutilate them. For these beautiful plants I reserve large and strong papers; and I already have some that make a very fine effect in this form. If this distribution pleases you I will keep to it, and since the three formats will be independent of each other, one is at perfect liberty to be satisfied by means of the herbaria, which I will make as complete as I can.

For a long time I have experienced the difficulties of nomenclature, and I have often been tempted to abandon it completely. But at the same time it would be necessary to give up books and in profiting from the observations of others; and it seems to me that one of the great charms of botany is, in addition to seeing by oneself, that of verifying what others have seen; to give, on the testimony of my own eyes, my assent to the fine and just observations of an author seems to me a real delight: instead, when I cannot find what he says, I am always troubled if it is not I who sees badly. Besides, being able to see only very little on my own, I have to rely for the rest on what others have seen; and in order to do this their different nomenclatures force me to penetrate as best I can the chaos of synonymy. In order not to get lost, I have to connect everything with one particular nomenclature; and I chose that of Linnaeus, as much by the preference which I have given to his system as because his names, composed of only two words, spare me the long phrases of others. In order to relate them painlessly to those of Tournefort, I often have to return to the Author whom both cite fairly constantly, namely, Gaspard Bauhin. It is in his Pinax that I look for their concordance. Since Linnaeus seems to me to do something fitting and appropriate when Tournefort merely takes the phrase of Bauhin in citing the original author and not that of whoever transcribed it, as people often very inappropriately do in France. So that although almost all the nomenclature of Tournefort is drawn word for word from the Pinax, one would believe, to read the French botanists, that neither Bauhin nor the Pinax ever existed; and to top it off, they consider it Linnaeus' crime not to have imitated their partiality. With regard to the

plants whose names Tournefort did not draw from the Pinax, one easily finds the concordance in the French Linnaean Authors, such as Sauvages, Gérard, Gouan, Guettard, and d'Alibard who almost all follow him.[361] Besides, Sir, you can easily spare yourself that trouble for the plants that you wish to indicate to me; it will be enough for you to give me the names from Tournefort or Vaillant, and I will try to find my bearings with them.

This winter I did only one herborization in the bois de Boulogne, and brought back some mosses that I do not think I have sent you; they will augment your small Mossarium. But one should not expect to be able to complete all the genera, even for one species alone. They are very difficult to mount in an herbarium, and some are so rare that I have never really seen nor expect to see them with my own eyes. I believe that in this family as in that of the algae it is necessary to stick to the genera whose species one encounters fairly often in order to have the pleasure of finding one's bearings and to ignore those the sight of which will never reproach us with our ignorance, or whose extraordinary form will make us make an effort to vanquish it. I am very short-sighted, my eyes are getting bad, and I can hope to collect only what fortuitously presents itself in places where I will know more or less what I am looking for. With respect to the manner of searching, I followed M. [Bernard] de Jussieu in his last herborization, and I found it so tumultuous and of so little use for me, that, if he were to have done another one, I would have declined to follow him. I accompanied his nephew last year, May twentieth at Montmorenci, and I brought back some pretty plants, among others, the Lysimachia tenella[362] which I believe I sent you. But I found in this herborization that the indications of Tournefort and Vaillant are very defective, or that since them, many plants have changed habitat. I searched and engaged everyone to search with care for, among others, the Plantago monanthos[363] at the end of the pond of Montmorency, and in all the places that Tournefort and Vaillant indicated, and we could not find even one stalk; On the return journey I found several plants of note and even quite near Paris, in places where they were not indicated. In general I was always unhappy in searching according to the observations of others. I still find my satisfaction better in searching on my own. I would not forget in my travels the genera that you particularly recommend to me and I will gather all the species of them which I find. I will do the same with those for which you have promised me the note. The methodical study of the gramineae is more difficult for me than that of mosses, not only on account of my poor eyes but especially because of the ineptness of my fingers. I also have the agrostographie of Scheuzer;[364] but with all the exactitude of this Author, his

eternal repetitions are intolerable to me, and I believe I am always rereading the description of the same plant. Nevertheless, Sir, if I had received the samples which you announced to me I could perhaps have assisted you in sorting them out and determining the names of some of them. I will send you from here those which I recognize.

I forgot, Sir, to speak to you about your books. I have so far only glanced at them; and as they are not of a size for carrying in the pocket, and I hardly read indoors in summer, I will wait perhaps until the end of next winter to return those to you that you will not need before then. I started to read the Anthologie of Pontedera,[365] and I found there objections to the sexual System that seemed quite strong, and I do not know how Linnaeus extricated Himself from them. I am often tempted to write in this Author's works and in the others the names of Linnaeus next to theirs in order to know what I am doing. I already gave in to this temptation for some of them, imagining in that nothing but an advantage for the book. I feel nonetheless that it is a liberty I would not have taken Without your consent and I will await it before continuing.

I owe you thanks, Sir, for the space you have had the kindness to offer me for the drying of plants: But even though this is a benefit of which I feel the privation, the necessity of frequently visiting them [to change the papers as the plants dry] and the distance between places which would make me consume a lot of time in traveling, prevents me from taking advantage of this offer.

The whim seized me to make a collection of fruits and seeds of all species which ought, with an herbarium, to make the third part of a natural history cabinet. Although I have acquired very little, and I could hope to make acquisitions only very slowly and by accident, I feel already for this matter the lack of space, but the pleasure of incessantly traveling and visiting my small collection can alone repay me the trouble of doing it, and if I hold it very far from my eyes, I would cease to enjoy it. If by chance, your Guards and gardeners sometimes found underfoot beechnuts of beech trees, fruits of alders, maples, and birch, and generally all the dried fruits of forest trees or others, I would have a double pleasure in embellishing my nascent collection, if they were in passing to gather some in their pockets, and if you were to send me kindly some specimens now and then.

Apart from the Histoire des Mousses by Dillenius,[366] I have other books of Botany that you keep at Malesherbes and about which you sent me the note. But if I had none I would certainly refrain from acquiescing in depriving you, for my pleasure, of the least of the amusements that are within your reach. I pray you, Sir, to accept my respect.

Paris, 11 May 1772

I have received, Sir, the seeds that you had the kindness to send me for which I beg you to accept my gratitude. I will enrich my small granary which is still quite paltry, but which I hope next winter to augment and arrange somewhat, because I reserve this arranging for the seasons when the countryside is deserted and walking impracticable. Since I gather fruits as well as seeds when I can, the fruits of the alder will not be too numerous even though the seed has fallen.

Since you approve, Sir, the distribution of herbaria that I had imagined I will make arrangements to pursue it. As it would seem to me nevertheless inconvenient to those who would like to acquire these herbaria to have to take them in three formats, I think that it is necessary to prefer one in order to render it as complete as possible, and that is the means I will choose for this, reserving the large one for better conserving the appearance of the large plants, and the small one for the convenience of the form, but not letting be inserted in the middle as much as will be possible for the extremes to contain so that with the other one can dispense with those which in this way will be hardly only for the true botanists and the curious.

I would have had something still to say on the Subject of Linnaeus raised in the last letter you had the kindness to write me, but it is impossible for me to find this letter at this moment and my extinguished memory could not retain the content. I will only say that it would seem to me all the more unlikely that he had the unjust and base project of extinguishing the memory of Tournefort, whom he cites fairly often in his *Species** and in almost every article in his *Genera*, but of whom he speaks in a thousand places in his writings with the greatest praise. I will relay only the beginning of a passage that I presently have before me. Sed adhuc majori architecto pro tanto aedificio exstruendo opus erat, quem providentia omnia gubernans tandem exeunte saeculo 17° in summo Tournefortio progenuit: genuinam methodum hic primus a Flore in classibus distinguendi, a fructu vero, in ordinibus dignoscendis, summa sapientia adornavit. Praecipua vero quae hic praestitit haec fuere &c. *Reformi Botanicae*, p. 4.[367] The summary of the method that he then makes is no less honorable to the Author. If French botanists gave to Linnaeus a quarter of the honor that he gives to his master, how much would they boast of their impartiality? But they take offense so easily that they vie with each other as to who will drag him

*Note. Only those who follow his method cite the phrases of Tournefort; Haller and all the foreign botanists cite by preference the authors from whom he took them. But when his phrases are original, and Linnaeus or others do not cite them, then they are wrong.

through the mud. For me, who is animated only by the love of justice, I know well that if someone treated M. Adanson with as much indignity and even bad faith with which he treats M. Linnaeus whom I do not know at all and in whom I take no other interest than that of truth and honesty, I would become impassioned for his just defense, as I am for that of Linnaeus. But, both the botanists and all the men of letters know no other justice or passion than the spirit of faction. Still it is less for love of him whom they follow than for hatred for him whom they do not follow.

I am beginning to wander the countryside, but I am still finding nothing; the cold and strong wind that blows constantly has dried the earth, much retarding the vegetation. If I am happy in the journeys I plan, I will have the honor Sir, to give you an account of my harvest.

As I have no right whatsoever to the name of citizen of Geneva and do not want to carry it, you will oblige me, Sir, in not giving me that title.

Paris, 8 March 1773

When I received, Sir, the last shipment of seeds that you had the goodness to send me, I wanted to wait to thank you as I ought, the shipment that I counted on soon having to begin the herbaria that were intended for you, and the books that I had to return to you after having kept them so long: But the other indispensable occupations that divide my time, and the small details thereof more tedious than I had thought have taken so long that I do not believe I will be able to send you the first of these herbaria before Easter; and I blame myself too much for my long silence for wanting to put it off until then. Concerning the books, as ones of this kind cannot be read quickly, I thought, to label each plant with the Linnaean name in order to get through them, in the hope that you could find some small further convenience in this addition in consulting these works. But the division of my time and the diminution of my taste for botany will force me to leave this enterprise incomplete, unless you desire, Sir, that it be finished; which would perhaps do me a service in reawakening in me a taste which until now has contributed not a little to making agreable the solitary life to which I have dedicated myself. Barring this, these books having become completely useless to me will be added to the specimens of herbaria which will unfortunately be far from the state I wanted to put them in and were certainly not worth the long wait. But it is my wont in the enterprises I take most to heart to exhaust myself in fine preparations and to do nothing worthwhile when I want to complete them. Condescend, sir, to sympathize with my misery; because I swear to you that my

good faith was and is completely absolute: but to my great regret the result does not correspond to it at all.

I have not yet been able to examine in detail the shipments with which you have kindly enriched my small granary that, for lack of space, it is impossible for me to put in order. But, sir, I will never cast my eyes there without gratitude for the care you have taken in my behalf and the kind remembrance of which it is the testament. I beg you to accept my respect.

JJ Rousseau

Paris, 18 April 1773

Your cooling-off, Sir, for botany consoles me in part for not being able to contribute herbaria to your diversion such as I planned to make. I made admirable preparations; I gathered a large quantity of plants. I was given several. I purchased boxes, paper, Cardboard, portfolios; I made plans. It was only when I finally wanted to use all this that I felt my inadequacy. I would certainly have succeeded better, if I had undertaken less, but I also would not have put the same zeal into it. The majority of my preparations are lost because they were poorly arranged and, instead of foreseeing the inconveniences of what I imagined, I knew them only in sensing them. Not having been able to take care of this whole store of plants, what I conserved was reduced to almost nothing. Finally I realized that for wanting to undertake too much, I changed an agreeable amusement into a painful chore, useless and costly. Nevertheless, in order still to provide some object for my country journeys, I am not renouncing herbaria completely; but the work that I want to put in will be such that, were it to be entirely lost, I would have few regrets and I would still have earned the amusement that I find in giving myself to it. I began three or four small herbaria in miniature to which I will limit myself; that which I will make each year will be neither fatiguing nor costly and will always support the remaining taste I have for herborization. I have prepared for you, Sir, two small samples of these herbaria, one in each format, to be sent to you by Easter, but M. de St.-Remi, who came to see me some time ago, and who promised to take them, has not come at all; I suppose that he did not make the trip from Malesherbes as he proposed, and I would have needed you to be pleased to indicate to me to whom I should give them to get them to you, as well as your two books which remain with me, M. de St.-Remi, who could not easily take it all with him, having kindly burdened himself with the two others when he came to see me.[368] I counted on dividing these herbaria into small portfolios or books, each with a hundred plants; but the smallness of the format, and also my poverty forced me to reduce

these books to sixty, in order to make them more portable and convenient. These herbaria, intended more for Ladies rather than botanists contain only fragments of plants, but which I attempted to make easily recognizable by their form and their color, as fast as the thing was possible. My project was at first to bring each of these small herbaria to six hundred plants chosen from the environs of Paris, and I would have furnished each year a book of a hundred plants; in reducing them to sixty, I would need ten years, instead of six to complete them, and that is a fairly chimerical project at my age. However if this arrangement suits anyone, I will follow it as much as possible for me: that is all I can promise. As for you, sir, I have dried and attached some large choice plants, of which there remain some to add. I expect to complete this small task next winter and send you these plants more worthy of your attention than the small playthings with which I amuse myself. But I cannot commit myself to continuing this collection because of the difficulty of transport and dessication. I am beginning to become too heavy and lazy for this. Parturiunt montes, that is what my great herbarium projects are reduced to. When you have received my two samples, would you be so kind, sir, as to let me know if I should continue them or abandon them. At all events I have saved the list of plants contained therein in order not to send the same ones twice. I beg you to accept my respect.

Paris, 2 May 1773

M. de St.-Remi has undertaken, sir, to bring you the two samples of herbaria about which I had the honor of speaking to you, and to which all the preparations that I made for this kind of work are reduced. I never imagined that these fragments would be useful to you, but only for those who you would indicate to me as having acquired some taste for botany, since it it is always necessary to begin the study by knowing roughly a certain number of plants. I have prepared some more in a larger format, but as they are still too small a number to be Called a collection, I am waiting to add some others to them in order to send you the whole. Concerning the two small herbaria, my plan was to augment them every year with the same number of new plants, and this small task, without being painful, would suffice to keep me a bit spellbound, to prevent me from gaining weight so readily and to give me an agreeable purpose for my promenades. I have even thought of a somewhat more handy form for the small portfolios, but I feel that these scraps have so little utility that it is not to be presumed that the continuation is desirable. Yet if it arrives,

you would kindly give me your opinion, Sir, and I would always be at your disposal.

I have also given M. de St.-Remi the two books from your library that remained with me, namely the Flora Prussica and the Anthologie of Pontedera. I added the Linnaean name to that of several plants, but I did not finish this work, and there are some for which the synonyms were impossible for me to find. Some of the illustrations made me discover some errors that I marked. As for example the transposition of *Carduus crispus* and *Carduus Acanthoides* that are shown the one for the other at the Jardin du Roi, which the Botanicon[369] had already made me suspect and which I verified well in the flora prussica.

I implore you, sir, to accept my respect.

Paris, 24 August 1773

You are sending back to me, Sir, the dried plants I had the honor and pleasure of passing along to you at different times. I understand nothing of this return. You indicate to me that you found duplicated plants. This could not be otherwise. The first Box contains the plants brought back from the herborization at Meudon that you permitted me to undertake with you, to which I added some others that then happened to be at hand. This is a small separate notebook destined to remain in this condition and which does not form a part of any other herbarium.

The two other Boxes are attempts and beginnings of herbaria, which, in the project that you approved, should have been followed successively by other similar boxes, making two collections, in different formats, of plants from the environs of Paris. Since these were two different herbaria of which you had the choice and of which the one you did not take could suit persons of your acquaintance, it was natural and even necessary that the same plants be duplicated, and this is one of the reasons you put forward to me for encouraging me to make several. I cannot grasp, Sir, why you now want different herbaria not to contain the same plants. With this condition, it was impossible to make more than one that would be complete. It is true that in this you have the kindness to care for my advantage in that you suppose that I would take back the duplicates in order to complete other herbaria: But having completely renounced herbaria, these duplicates have become useless to me; they would not let me take the time to search for them and replace them, and If it is possible to have time to lose, it is not at my age and in my state. Hence, Sir, unless you do not require for your convenience that I leaf through and compare these note-

books in order to avoid duplication, I will wait to undo them until you arrange to retrieve the entirety.

Another thing. When M. de St.-Remi proposed to pay me for the first Notebooks that you received, I told him that having given up selling herbaria, I could not receive any payment for what I wanted to make for you, but that when this herbarium was finished, which would not take long, if, as often happens in large libraries, there is in yours some duplicate or incomplete book on botany, and if it pleased you to make a gift of it to me, I would accept it with all my heart and would consider my trouble to be more than compensated. It was, sir, a proposal of honesty that had no other aim that put you at your ease on this score, because I care very little henceforth for books on botany. The few that I have suffice and beyond in order to satisfy my whim, when it impels me sometimes to leaf through them, and I would even be more tempted to rid myself of a portion than intend to acquire new ones.

Nevertheless, Sir, you speak to me about buying botany books, and even propose that I send you a list of those I desire as If it were a Question of a library and botany books were common and inexpensive. I will abstain from holding forth on such a proposition. You will permit me only to say to you that it is not at all my place to respond to everything that I said to M. de St.-Remi. I should have known for a long time that we do not understand each other as well about anything as I thought previously in the simplicity of my heart.

I am grateful, Sir, for the proposal you have the kindness to make to me to go herborizing in your neighborhood. I feel certainly all the rewards of the advantages that I would find there, and I will regret my entire life the time when I was willing to go enjoy it, but this time is past, just as that of pleasure trips. Receive, I beg you, all my thanks and the assurances of my regret.

J.-J. Rousseau

Your letters, Sir, were corrected in the past, they are not anymore. For me who has always remained the same, I scrawl also. I would like to be able to write with more clearness, but that is impossible for me, and my detachment from everything so increases my laziness, that if it were necessary to rewrite my letters, I would never write anything more at all.

Letter of Jacob Jonas Björnstall[370] *to Carl Christoffer Gjörwell*

1 September 1770

I want now to write you a small letter on a great man, on J.-J. Rousseau. He arrived in Paris toward the end of June, as I indicated to you in my last. I have formed with him a relationship as intimate as one can have with such a bizarre philosopher. He occupies himself with botany with that vehemence and that ardor which distinguishes all his works, The first time that I was at his home, he asked me if I had studied this science, and when I told him that I had received some lessons from Linné, he rose in a lively manner and cried out forcefully: You know therefore my master, my teacher, the great Linné! If you write to him, he added, greet him on my behalf, and say to him that I know on the earth no man greater than he. Say to him that I owe to him health and life. Rousseau testified again, by the most emphatic expressions, his high esteem for the greatest botanist in the world. Then, he showed me the *Philosophie Botanique*, and said to me; There is more knowledge in this work than in all the volumes in folio: your books of the north are in general too full of erudition; but in this one there is not a word that is not necessary. This praise, so great on the part of Rousseau, surprised me greatly, because in general he speaks little and he is restrained with praise; but the name of Linné put him beside himself. He asked if Linné would receive gladly a letter from him; he wanted to write him and to charge me with the delivery of his letter. I assured him that no letter from Paris could be more agreeable to Linné and I asked him not to forget this project. This is very remarkable, because Rousseau does not write willingly, and reads even few of the letters which people address to him. . . . They told me that Rousseau had the design of publishing a book on botany, and I asked him if this was true. He responded that no it was not, adding that there was a great difference in being a master or being a disciple, and that, even though it was now a fairly general practice to begin to teach others before being instructed oneself, he did not want to follow it. I am, he said, a disciple of Linné, and I do myself the honor. I asked him what he thought of Adanson. He responded that Adanson, and Crantz in Germany, had learned all they know from Linné, that they had then

been ingrates toward their master and that they had treated him badly, etc. For the rest; he added, there are in France many Linnaean botanists: And he named me some from Lyon and Montpellier, etc., I mentioned to him one from Rouen. I spoke then of his *Emile*: I told him that I had learned in this book many good things, but that I asked him to excuse me, if I was not of his opinion on all points, and that he himself had taught me to doubt, etc. He responded to me that he greatly esteemed the man who knew how to doubt, that his system of education was difficult, and that it required all the devotion of a father.

. . . Botany is what occupies him the most, and he herborizes with M. de Jussieu.[371] Nevertheless I have seen him several times copying music.

Letter to Carl von Linné (Carolus Linnaeus)[372]

Paris, 21 September 1771

Receive with kindness, Sir, the homage of a very ignorant, but zealous, disciple of your disciples; who, in large part, owes to the meditations of your writings the tranquility he enjoys in the midst of a persecution all the more cruel as it is more hidden and which covers with the mask of benevolence and friendship a hatred more terrible than hell ever aroused. Alone, with nature and you, I pass the most delightful hours in my country walks, and I derive a more genuine profit from your philosophia botanica than from all the books on morality. I learn with joy that I am not completely unknown to you, and that you wish to send me some of your productions. Be assured, Sir, that they will be my treasured reading, and that the pleasure will be more alive in receiving it from you. I spend a second childhood amusing myself by making a small collection of fruits and grains: if among your treasures of this kind there are some castoffs with which you wish to make someone happy, condescend to think of me; I would even receive them, Sir, with gratitude, the sole recompense that I could offer you, but that the heart from which it comes does not make it unworthy of you. Farewell, Sir; continue to open and interpret for men the book of nature. For me, content to decipher in your wake some words in the pages[373] of the vegetal realm, I read you, I study you, I meditate on you, I honor you, and I love you with all my heart.

Letter to André Thouin

this Thursday in great haste [July–September 1771?]

Rousseau very mortified that his health and the weather refuse him the pleasure that he promised Himself of following Monsieur Touin at St. Leger attests to him his regrets. He wishes him and his company a bon voyage and a rich herborization; when he undertakes some other herborization nearer to Paris Rousseau will be charmed to accompany him if he wishes to admit him to his entourage. But in this moment the doubtful state of his health would make him afraid to expose himself to some embarrassment if he succumbed to the temptation of running the risk. If some branch of Gale[374] would not burden M. Touin too much Rousseau would ask him to be kind enough to burden himself with some for him. He salutes him with all his heart.

Perhaps I will go to the jardin du Roy tomorrow morning.

Letter to Marc-Michel Rey[375]

Chateau de Trye, 28 December 1767

I accept with great pleasure your kind attention in furnishing me with Books of Botany. For almost nothing of this kind can be found in Paris. I send you enclosed a note of those I need and I have even included more than I need at one time, so that you can provide me with those which fall into your hands. I have arranged them in the order in which I would like to acquire them if I had the choice, that is to say the first by preference and only two or three at a time. For even though I live in this retreat in honest comfort, thanks to the kindnesses of His Britannic Majesty and those of the master of the house, as my present situation subjects me to many expenses; I can do only very little for my taste for plants, even though it subjugates me to the point that it becomes the passion of a child. There are many foreign plants in the country where you are;[376] do you not know somebody who might have the charity to send me some dried ones well-packaged with the names of Linnaeus to augment my small herbarium.

Good day, my dear Comrade, I embrace you and all your dear family with all the tenderness of my heart.

The herborist of Madam the Duchess of Portland

Books to acquire[377]
Remberti Dodonaei—Stirpium historiae Pemptades sex f°.[378]
Lobelii Plantarum icones.[379]
Tabernaemontani icones plantarum.[380]
J.J. Scheutzer Iter alpinum. 4°.[381]
Haller, Iter helveticum. 4°.[382]
Morison, de Plantis umbelliferis. 4°.[383]
Flora Prussica. 4°.[384]
C. Clusii rariorum plantarum historia. f°.[385]
C. Linnaei fundamenta botanica. 8°.[386]
Ejusdem critica botanica. 8°.[387]
Ejusdem Iter {Oelandicum / Gotlandicum[388]} 8°.

Letter to Pierre Guy[389]

25 November 1767

. . .

Here, Sir, is a more interesting commission than my Dictionary [of Music]. These are Books on botany which are with Briasson and which I pray you to acquire, taking care to choose good copies, and not damaged ones, and to have the ones bound that are not.

3 ..J. Ray, Methodus emendata et aucta &c. 8°
9 ..Caroli Linnaei filii plantae upsalienses. f°. . . 10.10
7 ..Gouan Hortus monspeliensis. 8° 7
60..Dilleni historia muscorum. 4° . . . . . 52.[390]

You will have the kindness to make a well-wrapped and segmented packet and to address it via the Stagecoach of Gisors to M. Renou, at the Chateau of Trye via Gisors. I do not know the name of the road where the office of the said Stagecoach is located, but it is the same as that of Rouen which you surely know. I would be relieved to have this shipment as soon as possible, on account of the Mosses the herborization of which takes place in winter. I request that you give me notice by mail under the same address, so that I can have the package picked up: it is Friday that the Stagecoach leaves Paris: you must bring the packages on Thursday evening. . . .

Is it absolutely impossible to find in Paris the *Dodonaei Pemptades* &c. on the illustrations of Lobel.[391]

Letter to the Duchess of Portland

Paris, 11 July 1776

The testimonial of remembrance and kindness with which Madame the Duchess of Portland honors me is a very precious gift that I receive with as much gratitude as respect. As for the other gift of which she notifies me, I beg her to permit me not to accept it. If its magnificence is worthy of her, it is in proportion to neither my situation nor my needs. I no longer have any of my botany books; I gave up that agreeable amusement, botany having become too fatiguing for my age. I have no tiny plot of earth for some parsley or carnations, all the more reason [not to have] plants of Africa, and in my greatest passion for botany, content with the hay which I found Underfoot, I never had a taste for foreign plants that we find among us only exiled and denatured in the gardens of the curious. Those Madame Duchess wishes to send me would thus be wasted in my hands; such would be the case for the same reason with the herbarium amboinense, and this loss would be regrettable in proportion to the price of this book and that of shipment.[392] These are the reasons that prevent me from accepting this superb gift; so long as however not to accept it preserves the memory and gratitude, in desiring only that it be more usefully employed.

I very humbly implore Madame Duchess to accept my deep respect.

JJRousseau

I just received the box, and although I very much wanted to remove the letter of Madame Duchess from it, it seemed to me more suitable, since I had to return it, to send it back Without opening it.

Letter to the Abbé de Pramont[393]

Paris, 31 April 1778

Your engravings of plants, Sir, have been reviewed and arranged as you wished.[394] You are requested to pick them up. They could rot in my room and would be nothing but a nuisance, because the trouble I took in arranging them makes me afraid to touch them once again. I should warn you, Sir, that some pages of the discourse are extremely scrawled and difficult even to join together without cutting the writing that I have sometimes stupidly prolonged on the margin. Although I have fairly rarely succumbed to the temptation to make remarks, the love of botany and the desire to please you sometimes carried me away. I can write legibly only when I copy, and I admit that I did not feel up to doubling my work in making rough drafts. If this scribbling makes you disgusted with your copy after having looked through it, I offer you reimbursement, Sir, with the assurance that it will remain my responsibility. Accept, Sir, my very humble salutations.

JJRousseau

Paris, [end of April 1778][395]

Obs:

I decided to cut completely the almost illegible scribblings of which I spoke in my letter to Monsieur the Abbé, given that the corrections [which are] very difficult to decipher would have been almost unlocatable, that it is better that one find nothing rather than errors, and that the bookbinder can easily attach white paper to the margins that are easy to fill better later on. If Monsieur finds these repairs too disagreeable, all I can do is reiterate to him the offer I have already had the honor of making to him. With regard to the blots and the dirtiness of the titles and several pages, he should recall that I am returning the book in the same condition in which he handed it over to me.

Fragments on Botany

I

Botany is the part of natural history which treats the vegetal realm, and because this realm is the richest and the most varied of the three, botany is the most substantial part of the naturalist's study.

Nature, which has put so much elegance in all its forms and so much choice in all its distributions, above all has taken particular care to cover the nakedness of the earth with an adornment so rich and so varied that it charms the eyes and surprises the imagination; it is in the examination of this brilliant adornment, it is in the study of this profusion of riches that the botanist admires with ecstasy the divine art and the exquisite taste of the worker who fabricated the robe of our common mother. The art of studying plants by the combination of the compounds which compose their substance, the art of determining their true or false medicinal virtues either by always imperfect and deceptive experiment or observation or by still more faulty chemical analysis has nothing in common with botany.[396] The botanist studies in plants [*végétaux*] their tissue, their shape, their organization, their generation, their birth, their growth, their life, and their death. He can also consider them by their color, their taste, their odor, their flavor, by all the rewards that they can offer to the senses; but this is only an analogical and secondary study for clarifying and confirming that of forms; to the eyes of the botanist plants are only organic beings, as soon as the vegetal is dead and ceases to vegetate, its parts no longer have the mutual correspondence which enables it to live and makes it a unity, it is no longer within the scope of the botanist, it is a simple substance, matter, a compound, a dead earth, which no longer belongs to the plant realm but to the mineral. Physicians, charlatans, empirics[397] can speak to him of the marvelous virtues of dead and decomposed plants, all of this does not concern him. To do so it would be necessary for him to give to the authority of men who are liars the faith he has only in nature which never lies and which tells him nothing similar.

The botanist suffers no intermediary between nature and himself. He admits as true only that which she shows him, he rejects everything that men want to add on their own authority. He leaves the plant the moment the doctor takes over, he observes it in its live state, dead he still studies it

by anatomy, he dissects and observes it, but as soon as its form is destroyed and ground in a mortar it is no longer anything to him. I insist strongly on this point, persuaded that the greatest obstacle to the progress of botany has consisted in the desire to make it a part of medicine. It is that which has rendered base, ridiculous and disgusting what is naturally cheerful and delightful. The most elegant forms, the most lively colors, the charming flowers, the delicious perfumes; an appealing and commodious study without apparatus, without expenses, without any other fatigue except country walks, without any instrument but a small microscope, a blade, a pair of pliers, and scissors for cutting. How different from this appealing study is that of anatomy whose horrible apparatus is revolting both to the heart and the senses, and makes you live with cadavers or that of minerals, which must be excavated from the entrails of the earth and analyzed at great expense, often at great risk in the lairs of the Cyclops.

The fields covered by flowers are the sole laboratory of the botanist. The promenade is his sole labor. He easily carries all his tools in his pocket, he only occupies himself with lovable objects and only sees garlands for shepherds where the herborist sees materials for enemas. Botany lacks nothing in order to be a delightful study but to be taken away from the physician and returned to the naturalist.

But, say ignorance and prejudice, what purpose does botany serve? What, the world was not created for anyone but the sick and if natural history does not cure fever its study is good for nothing. I agree that works useful to the body should have precedence; but of all the uses we make of our leisure, those which cure us of ignorance and error are without question the least useless. And if you permit man to have games, permit him also the examination of the universe and its parts. Since not everyone has either the honor or the capacity to pass their lives killing beasts or shuffling cards, it is necessary that some idlers amuse themselves with the contemplation of nature.

2

Are there no men sensitive to the most touching beauties of nature who do not constantly introduce some personal interest into it? Is it absolutely necessary to be a physician in order to observe and admire the marvels of vegetal organization? The adornment of the earth, this adornment at once superb and cheerful, does it not deserve on its own account any of our consideration; have these colors, these smells, these elegant and varied shapes been given to plants merely that they might be ground up in a mortar? Ah, let us know how to love nature, let us know how to search for her,

study her, know her, admire these beauties with which she is adorned not for us, let us learn to remain between her and us and be cured of laziness, boredom, of being a burden to ourselves and others. Let us give ourselves easy, innocent amusements which relieve us from searching for disasters, for criminals, for madmen. If the study of plants purges my soul that is enough for me, I do not desire any other pharmacy.

As soon as you see the earth covered by a rare green and almost imperceptible duvet, hurry to change it or collect the plants you want to conserve, because they will soon decay.

3

This would be a rather large service to busy people thus relieving them of the importunity of idlers, and the best without being the sole means of succeeding in it would be to occupy the idlers themselves.

4

So that we do not look in this book for more worth than it has, I let it be known from the first words of the title that it is only the amusement of an idle man, and I ought to add that it is but the work of an ignorant one.

In these majestic forests which crown the mountains, in these fresh shady spots which border the streams in the valleys, others search for drugs. Pharmacists see in the rich decoration of the fields nothing but ingredients for enemas, a fine idea if human life gains from it, if men conduct themselves better and live longer. For myself I see objects of admiration which transport me and make me respect the organization which produces them. What[!] would I cut, grind up, crush these roses, this reseda, this Euphrasia in a mortar; I would destroy these elegant branches, this pretty foliage, I would crush the brilliant and delicate tissue of these flowers. No, I will contemplate, I will gather, I will uproot, I will divide, I will dissect perhaps, but I will never crush and destroy the fragile beauties I admire with a stupid and brutal hand. I want my eyes to enjoy them, observe them, exhaust them, be sated if possible: these forms, these colors, this symmetry were not put here for nothing.

5

The leaves of the Spinach, of the Arum, of the sorrel, of the Good-King-Henry resemble each other enough so that one can sometimes confuse them.[398]

But if those which you see are starchy it is the Good-King-Henry. If they are acidic to the taste it is the sorrel. If you see on them through the day a line parallel to their edging it is the arum. The Spinach remains then easy to distinguish. It has none of this.

The leaf of the succisa resembles a bit those of a Centaurea and other plants. But if you want to distinguish it with a sure eye, gently tear the leaf: if you see a thread subtly spin and stretch out between the two halves of the leaf, it is definitely the succisa. For proof extract the root. You will find it gnawed and as if bitten, it bears also for this the other name of Devil's bit Scabious.

6

Botan. François. T. I. P. 154[399]

The public which has no method and knows nothing at all about species should not give to the Cherry the name of prune tree; but whoever knows and admits the genera will place the Cherry in the genus of the plum trees.

7

M. Adanson blames M. Linnaeus for having criticized this singular phrase of Tournefort: *Vicia flore vicia sepium*,[400] as if he ignored, adds M. Adanson, that plants of diverse families can have a resemblance in some of their parts: but this is not it seems to me what is at stake here. In order to distinguish two species of the same genus, it is not necessary to report what they have in common but what is different. For finally there is no plant which has flowers more similar to those of the vicia sepium than the vicia sepium itself. In order to distinguish them it does not suffice to have said what they have in common if one does not add in what consists their difference.

8

Colors to provide myself

Green of iris
Vermillion
high-quality lacquer
Blue of Prussia
Very pure ultramarine. 10 to 12 grains at least
style[401] of grain

Gum resin
empty shells and some good brushes.

9

M. D'Alibard[402] in his *Florae parisiensis prodromus* has confused the receptacle with the placenta. These are very different ideas. The receptacle is the part by which the fruit holds on to the plant, the placenta is the part by which the seeds hold on to the pericarp. It is true that when the seeds are naked the receptacle and the placenta are the same thing. But whenever the fruit is angiospermous the receptacle and the placenta are different.

10

According to Rey,[403] the flowers indiscriminately called polypetalous are those whose corolla is composed at most of five petals. Instead, the polyspermous fruits are those which contain only more than four seeds. The difference in this numerical measure comes from the numerous rose family being all pentapetalous, and that the two families of boraginaceae and labiates are tetrasperms, which has engaged this author in taking the indefinite denomination of several beyond the most frequently determined numbers. It seems nevertheless that he should still have included among the determined numbers the hexapetalous corollas which most of the lilies bear, and for this reason are called polypetalous as has been done ever since M. Ludwig[404] for the flowers which have more than six petals.

11

There are buds with fruits, buds with leaves, and buds with fruits and leaves. Trees and shrubs which flower before leafing all have buds with fruits and buds with leaves; but those which leaf before flowering, such for example as the Alisier, the white Thorn etc., have only mixed buds, that is, leaves and fruits at the same time.

12

Imbricate: adj. arranged graduated and alternately by stages as one arranges Tiles on roofs. This occurs more commonly in calyxes of composite flowers than in all the other parts of plants [*végétaux*]. An imbricate Calyx is composed of several rows of scales which encircle and surround the florets in such a way that the first inner row of scales encircles and di-

rectly touches the florets, the second row of scales encircles and touches the first, each exterior scale covering the junction of two interior ones and each junction of the second row falling on the middle of a scale of the first. The third row encircles the second as the second encircles the first and so forth; as the scales gradually diminish in size each row is shorter than the one it embraces and allows the upper extremity to be seen and all these rows are easily distinguished by eye even though all are attached at the base to the same disk or receptacle.

13

M. Linnaeus gives the name receptacle to the adherence of the fruit to the plant and the adherence of the seed to the fruit. It seems to me better to follow in this the French botanists who reserve the name receptacle for the first and for the other use that of placenta.

14

Nature has not made the useless expense of embellishing and varying the appearance of plants with that which is hidden as by that which is visible.

Surely it is an object worthy of human curiosity to know all the threads of this superb tapestry which covers the face of the earth.

It is necessary to distinguish those which are arranged in a spiral, such as

those which are alternate such as

and those which are scattered in a confused way such as

Since for example in this charming small blue flower called by botanists Myosotis scorpiodes,[405] the lower leaves are narrow at their junction, broad and rounded at the other extremity as in the form of a spatula, and those at the top by contrast are broader at the base than at the point. Present these two different leaves one next to the other, one will never say by their shape that they belong to the same plant.

LETTER TO FRANQUIÈRES

Letter to Franquières

Rousseau to Laurent Aymon de Franquières[1]

Here it is, Sir, this wretched babble that my humiliated amour-propre has made you await so long, for lack of feeling that a much nobler amour-propre should have taught me to surmount the other. What does it matter that my verbosity appear wretched to you, provided that I be content with the sentiment which dictated it to me? As soon as my improved condition restored some strength to me, I profited from it to reread it and send it to you. If you have the courage to go all the way to the end, I beg you afterward kindly return it to me, without saying anything to me about what you thought of it, and which I understand more than enough. I salute you, Sir, and embrace you with all my heart.

Renou[2]

Monquin, 25 March 1769

Rousseau to Laurent Aymon de Franquières

Bourgoin, 15 January 1769

I feel, Sir, the uselessness of the duty I am fulfilling in answering your last letter: but after all it is a duty that you are imposing on me and I gladly fulfill it though badly, given the distractions of the condition in which I am.

My design in telling you my opinion here concerning the principle points of your letter is to tell it to you with simplicity and without seeking to make you adopt it.[3] That would be against my principles and even against my taste. For I am just; and as I do not at all like someone to seek to subjugate me, I do not seek to subjugate anyone either. I know that common reason is very limited, that as soon as one departs from its narrow bounds, each has his own which belongs only to himself, that opinions are propagated by opinions, not by reason, and that whoever yields to someone else's reasoning, something already quite rare, yields by prejudice, authority, affection, or laziness; rarely, perhaps never, by his own judgment.[4]

You point out to me, Sir, that the result of your inquiries concerning

the author of things is a state of doubt. I am unable to judge concerning this state, because it has never been my own. I believed in my childhood by authority, in my youth by sentiment, in my mature age by reason; now I believe because I have always believed. While my extinguished memory no longer puts me back on the path of my reasonings, while my enfeebled power of judging no longer permits me to begin them anew, the opinions which resulted from them remain with me in all their force; and without having the will nor the courage for putting them into deliberation once again, I adhere to them confidently and conscientiously, certain of having, in the vigor of my judgment, brought to their discussion all the attention and good faith of which I was capable. If I have been mistaken, it is not my fault, but nature's, which did not give my head a greater measure of intelligence and reason. I have no more today; I have much less. On what foundation, therefore, would I begin to deliberate again? The moment is pressing; the departure is drawing near. I would never have the time nor the strength to finish the great work of a recasting. Allow that in any event I bear away with me the consistency and firmness of a man, and not the discouraging and timid doubts of an old babbler.

With respect to what I can recall of my former ideas, with respect to what I perceive concerning the movement of your own, I see that not having followed the same path in our inquiries, it is hardly surprising that we should not have arrived at the same conclusion. Weighing the proofs for the existence of God with the difficulties, you have found none of the sides sufficiently preponderant for you to decide, and you have remained in doubt. That is not the way I proceeded. I examined all the systems concerning the formation of the universe that I was able to get to know; I meditated on those I could imagine. I compared them all as best I could: and I made up my mind, not for the one which offered me no difficulties at all, for they all offered me some, but for the one which seemed to me to have the fewest. I told myself that these difficulties were in the nature of the thing, that the contemplation of the infinite would always surpass the limits of my understanding, that, being obliged never to hope to conceive fully the system of nature, all I could do was to consider it from the sides that I could grasp, that it was necessary to know how not to know in peace all the rest; and I admit that in these inquiries I thought as do the folk of whom you speak who do not reject a clear or sufficiently proven truth on account of the difficulties which accompany it, and which one could not remove. I then had, I admit, such a bold confidence, or at least such a strong persuasion, that I would have defied every philosopher to propose any other intelligible system concerning nature, to which I could not have opposed stronger, more invincible objections than those he could oppose

to me about my own; and then it was necessary to resolve myself to remain without believing anything as you do, which did not depend on me, or to reason badly, or to believe as I have done.

An idea which came to me thirty years ago has perhaps contributed more than any other to make me unshakable.[5] Let us suppose, I said to myself, mankind having grown old until this day in the most complete materialism, without an idea of divinity or of soul having ever entered into any human mind. Let us suppose that philosophical atheism had exhausted all its systems for explaining the formation and the working of the universe solely by the interplay of matter and necessary motion, an expression about which, moreover, I have never comprehended anything.[6] In this condition, sir, excuse my frankness, I further supposed what I have always seen, and what I felt must be, that instead of resting tranquilly in these systems, as in the bosom of the truth, their restless partisans incessantly sought to speak about their doctrine, to clarify it, to extend it, to explain it, to palliate it, to correct it, and like someone who feels the house he inhabits trembling under his feet, to shore it up with new arguments. Let us finally end these suppositions by that of a Plato, of a Clarke, who rising suddenly in their midst, had said to them: My friends, if you had begun the analysis of this universe by that of yourselves, you would have found in the nature of your being the key to the constitution of this same universe that you seek in vain without it.[7] Then explaining to them the distinction between the two substances, he would have proven to them by the very properties of matter that, whatever Locke may say about it, the supposition of matter thinking is a genuine absurdity.[8] He would have made them see what is the nature of a truly active and thinking being, and from the establishment of this being who judges, he would have finally ascended again to the confused, but sure, notions of the Supreme being:[9] who can doubt that, struck by the brilliance, the simplicity, the truth, the beauty of this entrancing idea, mortals until then blind, enlightened by the first rays of the divinity, would have offered to it by acclamation their first homage, and that thinkers above all and philosophers would have blushed for having contemplated for so long the exteriors of this immense machine, without finding, without even suspecting the key to its constitution, and always crudely limited by their senses, for never having known how to see anything but matter where everything showed them that another Substance gave life to the universe and intelligence to man. It is then, sir, that the fashion would have been favorable to this new philosophy, that the young and the wise would have found themselves in agreement, that a doctrine so beautiful, so sublime, so mild, and so consoling for every just man would have really stirred all men to virtue, and that

this fair word "humanity," now reduced to the point of insipidity, to the point of ridicule, by people the least humane in the world, would have been more impressed in hearts than in books. A simple transposition of time would then have sufficed for reversing the path of philosophical fashion, with this difference, that the fashion of today, despite its glittering words, does not promise us a very respectable generation, nor very virtuous philosophers.

You object, Sir, that if God had wanted to oblige men to know him, he would have placed his existence in evidence before all eyes. It is for those who make faith in God a dogma necessary for salvation to answer this objection, and they answer it by revelation. As for me, who believes in God without believing this faith to be necessary, I do not see why God would put himself under the obligation to give it to us. I think that everyone will be judged not concerning what he has believed, but concerning what he has done; and I do not at all believe that a doctrinal system is necessary for works, because the conscience takes this doctrine's place.

I well believe, it is true, that it is necessary to be of good faith in one's belief, and not to make from it a system favorable to our passions. Since we are not all intelligence, we cannot philosophize with so much disinterestedness that our will does not have a little influence over our opinions. One can often judge concerning the secret inclinations of a man by his purely speculative sentiments;[10] and that being posited, I think it could well be that someone who has not wanted to believe might be punished for not having believed.

Nevertheless, I believe that God has sufficiently revealed Himself to men both by his works and in their hearts, and if there are any who do not know him, according to me this is because they do not want to know him or because they have no need of it.

In this latter case is the savage and uncultivated man who has not yet made any use of his reason, who, governed only by his appetites, has no need of any other guide, and who, following only nature's instinct, advances by movements that are always right.[11] This man does not know God, but he does not offend him. In the other case, on the contrary, is the philosopher who, by dint of wanting to exalt his intelligence, of refining, of splitting hairs over what was thought prior to him at last unsettles all the axioms of simple and primitive reason, and for wanting always to know more and better than others arrives at knowing nothing at all.[12] The man who is simultaneously reasonable and modest, whose practiced but confined understanding feels its limits and keeps within them, finds in these limits the notion of his soul and that of the author of his being, without being able to pass beyond in order to render these notions clear and

to contemplate so closely the one and the other as if he were himself a pure mind. Then seized by respect he stops, and does not touch the veil, content to know that the immense Being is underneath.[13] This is as far as philosophy is useful for practice; the remainder is no more than an idle speculation for which man was not made at all, from which the moderate reasoner abstains, and into which the common man does not enter at all. This man, who is neither a brute nor a prodigy, is man properly speaking, the mean between the two extremes, and who comprises nineteen twentieths of Mankind. It is for this numerous class to sing the Psalm *Coeli enerrant*, and this is the one indeed which does sing it.[14] All the peoples of the earth know and adore God, and though each one dresses him up according to its fashion, yet beneath all these diverse raiments one always finds God. The small number of elite who have higher demands about doctrine, and whose genius does not confine itself to common sense, wants a more transcendent one, this is not for what I blame it: But that it should go from there to put itself in the place of mankind and say that God has hidden Himself[15] from men because it, the small number, no longer sees him, I find that in this it is wrong. It can happen, I agree, that the stream of fashion and the play of intrigue might expand the philosophical sect and persuade the multitude for a moment that it no longer believes in God. But this transient fashion cannot last, and however one proceeds, it will always be necessary in the long run to have a God for man. Finally, if by straining the nature of things the divinity would increase in evidence for us, I do not doubt that the new Lyceum would increase by the same ratio the subtlety for denying it. In the long run reason takes the bent that the heart gives to it; and when one wants to think about everything otherwise than the people do, one arrives at the end sooner or later.

All this, sir, hardly seems philosophic to you, or to me. But always in good faith with myself, I feel joined to my reasonings, however simple they may be, the weight of interior assent.[16] You want it to be distrusted; I could not think like you on this point, and on the contrary, I find in this internal judgment a natural safeguard against the sophisms of my reason. I even fear that on this occasion you are confusing the secret penchants of our heart which lead us astray, with this even more secret, more internal, *dictamen* which entreats and murmurs against these self-interested decisions, and leads us back in spite of ourselves onto the road of the truth.[17] This interior sentiment is that of nature itself; it is an appeal on its part against the sophisms of reason, and what proves it is that it never speaks more strongly than when our will yields the most obligingly to judgments that this sentiment persists in rejecting. Far from believing that whoever judges according to it is subject to being mistaken, I believe that it never

misleads us and that it is the light of our feeble understanding, when we want to go beyond what we are able to conceive.

And after all, how many times is not philosophy itself, with all its pride, forced to have recourse to this internal judgment that it affects to despise. Was it not this alone which made Diogenes walk as his only reply before Zeno who was denying movement?[18] Was it not by this that all philosophical antiquity responded to the pyrrhonists?[19] Let us not go so far: while all of modern philosophy rejects spirits, suddenly Bishop Berkley arises and maintains there is no body. How has anyone managed to respond to this fearsome logician?[20] Remove the interior sentiment, and I challenge all modern philosophers together to prove to Berkley that there are bodies. Good young man, who seems to me so well born, some good faith I implore you, and allow me to cite you here an author who will not be suspect to you, the author of the *Philosophic Thoughts*.[21] Let a man come to you to say that casting at random a multitude of letters from the printing shop, he saw the *Aeneid* all arranged result from this throw. Allow that instead of going to verify this marvel, you would answer him coldly: Sir, that is not impossible, but you are lying. By virtue of what, I pray you, will you answer him thus?

Well who does not know that without the internal sentiment, there would soon remain no traces of truth on earth, that we would all be successively the playthings of the most monstrous opinions, to the extent that those who would uphold them had more genius, skill, and wit, and that finally reduced to blushing at our very reason, we would soon no longer know what to believe nor to think.

But the objections. . . . No doubt there are insoluble ones for us and many, I know. But once more, give me a system where there are none, or tell me how I ought to decide. Even more, by the nature of my system, provided that my direct proofs are well established, the difficulties should not detain me, given the impossibility where I am, I a composite being, of reasoning exactly concerning pure minds and for observing sufficiently the nature of them. But you materialists, who speak to me of a single, palpable substance, subjected by its nature to the inspection of the senses, you are obliged, not only to tell me nothing but what is clear, well proven, but to resolve all my difficulties in a wholly satisfying way, because we possess, you and I, all the instruments necessary for this solution. And, for example, when you make thought issue from combinations of matter, you must show me through the senses these combinations and their result by the laws of physics and mechanics alone, since you acknowledge no others. You Epicurean, you make up the soul from subtle atoms. But what do you call "subtle," I pray you? You know that we do not know any absolute di-

mensions, and that nothing is small or large except relatively to the eye which looks at it. I assume that I take an adequate microscope and look at one of your atoms. I see a large piece of crooked rock. From the play and hooking up of such pieces, I am waiting to see thought result. You Modernist, you show me an organic molecule. I take my microscope, and I see a dragon as big as half my room: I am waiting to see such dragons shaping and twisting themselves until what I see resulting from the whole is a being not only organic but intelligent, that is to say a being that is rigorously one, etc., and not an aggregation.[22] You might indicate to me, Sir, that the world was arranged by chance, like the Roman Republic. For the comparison to be precise, it would be necessary for the Roman Republic not to have been composed of men, but of pieces of wood. Show me clearly and through the senses the purely material generation of the first intelligent being; I ask nothing more of you.

But if all is the work of an intelligent, powerful, and beneficent being, from where does the evil on earth derive?[23] I admit to you that this so terrible a difficulty has never struck me very much, either because I have not conceived it well, or because in fact it does not have all the solidity it appears to have. Our philosophers have risen up against metaphysical entities, and I know no one who fabricates so many of them. What do they understand by "evil"? What is "evil" in itself? Where is "evil" relative to nature and to its Author?[24] The Universe subsists; order reigns there and is preserved there; everything perishes in succession there, because such is the law of material and moved beings. But all is renewed there and nothing degenerates there, because such is the order of its author, and this order does not contradict itself. I do not see any evil in all that. But when I suffer, is this not an evil? When I die, is this not an evil? Not so fast: I am subject to death, because I received life. There was for me only one means for not dying; it was to have never been born. Life is a positive but finite good, whose limit is called death. The limit of the positive is not the negative; it is zero. Death is terrible for us, and we call this terror evil. Pain is also an evil for the one who suffers, I agree. But pain and pleasure were the only means for attaching a sensitive and perishable being to its own conservation, and these means are managed with a goodness worthy of the Supreme Being. At the very moment that I am writing this I have just experienced again how much the sudden cessation of a sharp pain is a keen and delightful pleasure. Would anyone dare tell me that the cessation of the keenest pleasure is a sharp pain? The sweet enjoyment of life is permanent; to taste it, it is sufficient not to suffer. Pain is only an importunate but necessary warning, that this good which is so dear to us is in peril. When I looked closely at all that, I found, perhaps I proved, that the senti-

ment of death and that of pain is almost nil in the order of nature. It is men who have sharpened it. Without their senseless refinements, without their barbarous institutions, physical evils would hardly reach us, would hardly affect us, and we would not feel death at all.[25]

But the morally evil! another work of man, in which God has no part other than of having made him free, and in this respect similar to himself. Will it then be necessary to blame God for the crimes of men and for the evils that they draw to them? On seeing a field of battle, will it be necessary to reproach him for having created so many broken legs and arms?[26]

Why, you will say, was man made free, since he must abuse his freedom? Ah, Monsieur de Franquières, if ever there existed a mortal who did not abuse it, this mortal alone honors humanity more than all the scoundrels who cover the earth degrade it. My God! give me some virtues and place me one day near the likes of Fenelon, Cato, Socrates.[27] What will the rest of mankind matter to me? I shall not blush for having been a man.

I have told you, Sir, here it concerns my sentiment, not my proofs, and you see it only too well. I remember having formerly encountered on my way this question of the origin of evil, and of having touched it lightly;[28] but you have not read these constant repetitions, and as for me, I have forgotten them: we have both of us done very well. All I know is that the facility that I had for resolving them came from the opinion that I have always had of the eternal coexistence of two principles:[29] the one active, which is God, the other passive, which is matter, which the active being combines and modifies with a complete power, but yet without having created it and without being able to destroy it. This opinion caused me to be jeered at by the philosophers to whom I told it: They judged it absurd and contradictory. That may be, but it did not appear so to me, and I found in it the advantage of explaining without difficulty and clearly to my liking so many questions in which they get entangled; among others the one which you have proposed to me here as insoluble.

Besides, I dare believe that my sentiment, weighing[30] little on every other matter, must do so a little on this one, and when you are better acquainted with my fate, some day you will perhaps say in thinking of me: who else has the right to augment the measure he has found of the evils that man suffers here below?

You attribute to the difficulty of this same question, which fanaticism and superstition have abused, the evils that religions have caused on earth. That may be, and I admit to you even that all formulas in matters of faith appear to me as only so many chains of iniquity, falsehood, hypocrisy, and tyranny. But let us never be unjust, and in order to give the evil more gravity let us not remove the good. To root out all belief in God from the heart

of man is to destroy all virtue there. This is my opinion, Sir. Perhaps it is false; but as long as it is mine I shall not be so cowardly as to dissemble it to you.

To do good is the sweetest occupation of a well-born man. His probity, his beneficence, are not at all the work of his principles, but that of his good-naturedness. He yields to his inclinations in practicing justice, as the wicked yields to his in practicing iniquity. To satisfy the taste which brings us to do good is goodness, but not virtue.[31]

This word virtue signifies "strength."[32] There is no virtue at all without struggle; there is none without victory. Virtue does not consist merely in being just, but in being so by triumphing over one's passions, by ruling over one's own heart. Titus rendering the people of Rome happy, distributing favors and benefits everywhere, might not waste a single day and still not be virtuous. He certainly was so in rejecting Berenice. Brutus having his children die might have been only just. But Brutus was a tender father; in order to do his duty he lacerated his insides, and Brutus was virtuous.[33]

You see here in advance the question restored to its place. This divine simulacrum of which you speak to me offers itself to me under an image which is not ignoble, and I believe I feel, by the impression this image makes within my heart, the warmth it is capable of producing. But in the end this simulacrum is still only one of those metaphysical entities out of which you do not want men to make Gods for themselves. It is a pure object of contemplation. How far do you take the effect of this sublime contemplation? If you only want to draw from it a new encouragement for doing good, I agree with you; but that is not what is at issue. Let us suppose your decent heart preyed upon by the most terrible passions, from which you are not immune, since in the end you are a man. This image, which in tranquility is depicted as so entrancing, will it lose nothing of its charms and will it not wane in the midst of the torrent? Let us set aside the discouraging and terrible supposition of the perils which can tempt virtue driven to despair. Let us suppose only that too sensitive a heart burns with an involuntary love for the daughter or the wife of his friend, that he be the master of enjoying her between heaven, which sees nothing of it, and himself who wishes to say nothing about it to anyone; that her charming shape, adorned by all the attractions of beauty and voluptuousness, entices him. At the moment when his intoxicated senses are ready to yield themselves to their delights, will this abstract image of virtue come to dispute over his heart with the real object which strikes it?[34] Will it appear as most beautiful to him at this moment? Will it wrest him from the arms of the one he loves to give himself over to the vain contemplation of a phantom he knows to be unreal? Will he end like Joseph, and will he leave his

cloak?[35] No, Sir, he will close his eyes and succumb. The believer, you will say, will succumb as well. Yes, the weak man; the one, for example, who is writing to you: but give them both the same degree of strength, and see the difference in the fulcrum.

What are the means, Sir, of resisting violent temptations when one can yield to them without fear while saying to oneself, what is the good of resisting? To be virtuous, the philosopher needs to be so in the eyes of men; but under the eyes of God the just man is quite strong.[36] He counts this life and its goods and evils and all its vainglory for such a little thing! He perceives so much beyond! Invincible strength of virtue, no one knows you except he who feels all his being, and who knows it is not in the power of men to dispose of it.[37] Do you sometimes read Plato's *Republic*? See in the second dialogue with what energy Socrates' friend, whose name I have forgotten, depicts to him the just man beaten down by the outrages of fortune and by the injustices of men, calumnied, persecuted, tormented, a prey to all the disgrace for crime and deserving all the rewards for virtue, already seeing death approaching, and certain that the hatred of the wicked will not spare his memory, when they can do no more to his person. What a discouraging scene, if anything could discourage virtue. Socrates himself, appalled, cries out and believes himself obliged to invoke the Gods before answering; but without the hope of another life, he would have answered badly for this one.[38] Yet, should everything end for us with death, which cannot be if God is just, and consequently if he exists, the idea alone of this existence would still be for man an encouragement to virtue and a consolation in his miseries, which are lacking to the one who, believing himself isolated in this universe, feels at the bottom of his heart no confidant for his thoughts. It is always soothing in adversity to have a witness that one has not deserved it; it is a pride truly worthy of virtue to be able to say to God: Thou who readest in my heart, thou seest that I use, in a strong soul and as a just man, the freedom that thou hast given me. The true believer, who feels himself everywhere under the eternal eye, likes to honor himself in the face of heaven for having fulfilled his duties on earth.[39]

You see that I have not disputed with you over this simulacrum that you have presented to me as the unique object of the virtues of the wise. But, my dear Sir, return now to yourself, and see how much this object is uncombinable, is incompatible, with your principles. How do you not feel that this same law of necessity which alone rules, according to you, the proceeding of the world and all events, also rules all the actions of men, all the thoughts in their heads, all the feelings in their hearts, that nothing is free, that everything is forced, necessary, inevitable, that all the move-

ments of man, directed by blind matter, depend on his will only because his will itself depends on necessity; that consequently there are neither virtues, nor vices, neither merit, nor demerit, nor morality in human actions and that these words, decent man or scoundrel, ought to be entirely devoid of sense for you. Yet, they are not, I am quite sure of it. Your decent heart, in spite of your arguments, protests against your dismal philosophy. The sentiment of freedom, the charm of virtue, make themselves felt by you in spite of yourself, and this is how on all sides this strong and salutary voice of the interior sentiment recalls to the bosom of the truth and of virtue every man whose badly conducted reason leads astray. Bless, Sir, this holy and beneficent voice which leads you back to the duties of man that the philosophy in fashion would end by making you forget. Do not abandon yourself to your arguments except when you feel them in agreement with the *dictamen* of your conscience, and every time that you feel a contradiction there, be sure that it is your arguments that deceive you.

Although I do not wish to quibble with you, nor to follow your two letters step by step, I cannot, however, deny myself saying a word concerning the parallel of the wise Hebrew and the wise Greek.[40] As an admirer of the one and the other, I can hardly be suspected of prejudices in speaking of them. I do not believe you to be in the same circumstance. I am scarcely surprised that you give all the advantage to the second.[41] You have not adequately made acquaintance with the other, and you have not taken adequate care to disentangle what is truly his own, from what is foreign to him and which disfigures him in your eyes, as in those of many other people who, according to me, have not looked more closely there than you have. If Jesus had been born in Athens, and Socrates in Jerusalem, if Plato and Xenophon had written the life of the first, Luke and Matthew that of the other, you would change your language a good deal, and what does him harm in your mind is precisely what renders his elevation of soul more astonishing and more admirable, namely his birth in Judea among the most abject people which perhaps then existed, whereas Socrates, born among the most instructed and most likeable, found all the help he needed for elevating himself easily to the tone that he took.[42] He rose up against the sophists as did Jesus against the Priests, with this difference that Socrates often imitated his adversaries and that if his noble and gentle death had not honored his life, he would have passed for a sophist like them. As for Jesus, the sublime flight taken by his great soul always raised him above all mortals, and from the age of twelve until the moment he expired, in the cruelest as well as in the most degrading of all deaths, he did not contradict himself for a moment. His noble project was to raise up his people again, to make it once again a free people and worthy of being so;

for it was from there that it was necessary to begin. The profound study he made of the Law of Moses, his efforts for reawakening in hearts enthusiasm and love for it, showed his purpose as much as was possible for not alarming the Romans. But his abject and cowardly compatriots, instead of listening to him, acquired a hatred for him precisely because of his genius and his virtue, which recalled to them their own unworthiness. In the end, it was only after having seen the impossibility of executing his project that he extended it in his head, and that, unable by himself to make a revolution among his people, he wanted to make one, through his disciples, in the Universe.[43] What prevented him from succeeding in his first plan, in addition to the baseness of his people incapable of every virtue, was the too great gentleness of his own character, a gentleness which is more akin to an angel and a God than to a man, which did not abandon him for an instant, even on the cross, and which causes streams of tears to be shed by whoever knows how to read his life as it must be read, through the rubbish by which these poor folk have disfigured it. Fortunately they respected and transcribed faithfully his speeches which they did not understand. Remove some oriental or badly rendered turns of phrase and one does not see a word there which would not be worthy of him; and it is there that one recognizes the divine man, who, out of such pitiful disciples, nonetheless made, in their crude but proud enthusiasm, some eloquent and courageous men.[44]

You object to me that he performed miracles. This objection would be terrible if it were just. But you know, Sir, or at least you might know that, according to me, far from Jesus having performed miracles, he declared very positively that he would not perform any, and indicated a very great scorn for those who asked for any.[45]

How many things would remain for me to say! But this letter is enormous. It is necessary to finish. This is the last time that I shall return to these matters. I wanted to gratify you, Sir, I do not at all repent for it; on the contrary. I thank you for having made me take up again a thread of ideas almost erased, but whose remains can have their use for me in the condition in which I am.

Adieu, Sir; remember sometimes a man whom you would have loved, I flatter myself, had you known him better, and who occupied himself with you in some moments in which one is hardly occupied except with oneself.[46]

Notes

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EDITORS' INTRODUCTION

1. For an extended interpretation of the Reveries see the "Interpretative Essay" in Butterworth, ed., *Reveries of the Solitary Walker* (Indianapolis: Hackett, 1992). Another provocative treatment can be found in Michael Davis, *The Autobiography*

of Philosophy: Rousseau's "The Reveries of the Solitary Walker" (Lanham, Md.: Rowman and Littlefield, 1999).

2. See p. 3 below.

3. *Confessions*, *Collected Writings*, Vol. 5, 5.

4. Ibid., 593.

5. For a more extensive treatment of this question, see the introduction to *Collected Writings*, Vol. 1, xiii–xxviii.

6. For the introduction to the *Dictionary of Music*, see *Collected Writings*, Vol. 7, 366–370.

7. Madeleine-Catherine Delessert, née Boy de la Tour (1747–1816), was related to Daniel Roguin, whom Rousseau met in Paris in 1741. Rousseau writes that he admired Mlle Boy de la Tour's "good sense and excellent character." *Confessions*, Book XII, *Collected Writings*, vol. 5, 493. The Boy de la Tour bank held Rousseau's savings, and the family assisted him in other ways. In 1766 Mlle Boy de la Tour married the wealthy banker, Etienne Delessert (1735–1816). James Edward Smith records her view of Rousseau in *A Sketch of a Tour on the Continent*, 2nd ed., vol. I (London: Longman, Hurst, Rees and Orme, 1807), 115–116.

8. See Martyn.

9. See such imitators of Rousseau as Priscilla Wakefield, *An Introduction to Botany in a Series of Familiar Letters*, 2nd ed. (London: E. Newbery, Darton and Harvey, Vernor and Hood, 1798) and Almira Phelps, *Familiar Lectures on Botany*, 5th ed. (New York: F. J. Huntington, 1837). For the crucial role of women in the epistolary scientific tradition, see also Ann B. Shteir, *Cultivating Women, Cultivating Science* (Baltimore: Johns Hopkins University Press, 1996).

10. Pléiade, Vol. IV, 966.

11. *Collected Writings*, Vol. 5, 294. The other important account is in the Letters to Malesherbes, in ibid., 575–576.

12. For a discussion of the significance of this sort of effort to settle one's opinions once and for all, see Arthur M. Melzer, "The Origin of Counter-Enlightenment: Rousseau and the New Religion of Sincerity," *American Political Science Review*, Vol. 90, no. 1 (March 1996): 344–360.

13. See Pléiade, Vol. IV, 1044–1054. For a translation and commentary on this work, see Christopher Kelly, "Rousseau's Philosophic Dream," *Interpretation*, Vol. 23, No. 3: 417–444.

14. See pp. 19–23 and 260–261 below.

15. An excellent discussion of this issue can be found in Victor Gourevitch, "Rousseau on Lying: A Provisional Reading of the Fourth Rêverie," *Berkshire Review*, Vol. 15 (1980): 93–107. On the more general question of Rousseau's views of hypocrisy and integrity, see Ruth W. Grant, *Hypocrisy and Integrity: Machiavelli, Rousseau, and the Ethics of Politics* (Chicago: University of Chicago Press, 1997).

16. See p. 32 below.

17. See pp. 21 and 260 below.

18. Jean Starobinski, *Blessings in Disguise, or the Morality of Evil*, trans. Arthur Goldhammer (Cambridge: Harvard University Press, 1993), 134–136.

19. See pp. 261 and 264 below.

20. See p. 265 below.

21. For a treatment of some of these texts, see Christopher Kelly and Roger Masters, "Human Nature, Liberty and Progress: Rousseau's Dialogue with the Critics of the 'Discours sur l'Inégalité' " in *Rousseau and Liberty*, ed. Robert Wokler (Manchester: Manchester University Press, 1995), 53–69.

22. For an excellent treatment of Rousseau's response to the figure of Socrates, see Clifford Orwin, "Rousseau's Socratism," *The Journal of Politics*, Vol. 60, no. 1 (February 1998): 174–187. For a discussion of Rousseau's view of Jesus, Socrates, and Cato, see Christopher Kelly, *Rousseau's Exemplary Life: The "Confessions" as Political Philosophy* (Ithaca: Cornell University Press, 1987), 50–75.

23. See p. 263 below.

24. For a comprehensive treatment of this theme, see Arthur M. Melzer, *The Natural Goodness of Man: On the System of Rousseau's Thought* (Chicago: University of Chicago Press, 1990). See also the introduction to *Collected Writings*, Vol. 5, xxi–xxvi.

25. See p. 51 below.

26. See p. 73 below.

27. See p. 64 below.

28. See Butterworth, ed., *Reveries*, 188–200.

29. See p. 46 below.

30. See p. 45 below.

31. For an elaboration on the place of this sort of poetic activity in Rousseau's thought, see Christopher Kelly, "Rousseau and the Case against (and for) the Arts," in *The Legacy of Rousseau*, ed. Clifford Orwin and Nathan Tarcov (Chicago: University of Chicago Press, 1997), 34–39.

32. See p. 93 below.

33. See p. 116 below.

34. See p. 130 below.

35. See p. 58 below.

36. See Alexandra Cook, "Propagating Botany: The Case of Jean-Jacques Rousseau," in *The Transmission of Culture in Western Europe, 1750–1850: Papers Celebrating the Bi-centenary of the Foundation in Geneva of the Bibliothèque britannique*, ed. D. Bickerton and J. Proud (Bern: Peter Lang, 1999), 59–82.

37. *Göttingsche Anzeigen von gelehrten Sachen*, Vol. 2, Pt. 145 (1781): 1164.

38. Johann Wolfgang von Goethe, *Werke*, ed. E. Trunz (Hamburg: Wegner, 1966–1967), 14 vols., and *Briefe*, ed. K. R. Mandelkow (Hamburg: Wegner, 1965–1968), Briefe I, 398.

39. Jeanne-Marie Roland de la Platière, *Lettres de Madame Roland*, ed. Claude Perroud (Paris: Imprimerie Nationale, 1900), Vol. I, 148.

40. *Collected Writings*, Vol. 5, 538.

41. See Pléiade, IV, 772.

42. Claude Lévi-Strauss, *Structural Anthropology Volume II*, trans. M. Layton (Chicago: University of Chicago Press, 1976), 40, emphasis in original.

43. See p. 133 below.

44. See p. 156 below.

45. Francis Bacon, *New Atlantis and the Great Instauration*, ed. J. Weinberger, rev. ed. (Wheeling, Ill.: Harlan Davidson, 1989), 16; see also Margaret C. Jacob,

Scientific Culture and the Making of the Industrial West (New York: Oxford University Press, 1997), 28–33.

46. See p. 60 below.

47. "Letters to Mme. Delessert," p. 130 below.

48. *Confessions*, Book V, *Collected Writings*, Vol. 5, 151.

49. See Lucille Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens* (New York: Academic Press, 1979).

50. See Yves Laissus and Jean Torlais, *Le Jardin du roi et le Collège royal dans l'enseignement des sciences au XVIIIe siècle* (Paris: Hermann, 1986), 308.

51. A. C. Crombie, *Styles in Scientific Thinking*, Vol. II (London: Duckworth, 1994), 1263.

52. W. T. Stearn, "A Royal Society Appointment with Venus in 1769: The Voyage of Cook and Banks in the *Endeavour* in 1768–1771 and its Botanical Results," *Notes and Records of the Royal Society of London*, Vol. 24 (1969): 85.

53. Naturalists might, for any number of reasons (reputation being not least among them), seek distinction for species or genera that were in fact not new at all, but merely variants on already recognized taxa. For further discussion of these controversies, see P. F. Stevens, "J. D. Hooker, George Bentham, Asa Gray and Ferdinand Mueller on Species Limits in Theory and Practice: A Mid-Nineteenth-Century Debate and Its Repercussions," *Historical Records of Australian Science*, Vol. 11, no. 3 (June 1997): 345–370.

54. See p. 189 below.

55. See p. 129 below.

56. See p. 231 below.

57. Rousseau appears to have been quite conversant with the principal authors who had treated South American flora up to that point: Hans Sloane, Patrick Browne, and Nicolaus-Joseph Jacquin. Notes on their works appear in his unpublished Neuchâtel manuscripts.

58. Crombie, 1267.

59. See p. 94 below.

60. W. T. Stearn, "Linnaeus's Sexual System of Classification," in *Sp. Pl.*, 34; see also "Methodi Naturalis Fragmenta," *PB*, para 77.

61. Stevens, 266.

62. Crombie, 1281.

63. On Jussieu's families, see Stevens, 298. Of the seven primary natural plant families discussed by Antoine-Laurent de Jussieu in his exposition of the natural order, Rousseau's eight letters to Mme Delessert discuss six.

64. Denis Diderot and Jean le Rond d'Alembert, eds. *Encyclopédie, ou Dictionnaire Raisonné des Sciences, des Arts, et des Métiers*, facsimile ed. (Stuttgart-Bad-Connstatt: Friedrich Frommann, 1966), s.v. "Botanique." Rousseau met both Buffon and two members of the Daubenton family. See his letter of 4 July 1770 to Latourette, p. 220 below.

65. Stevens, 267.

66. See p. 99 below.

67. Stevens, 1.

68. For example, Goethe's "Formation of the Calyx" in *The Metamorphosis of Plants*, par. 32 closely follows "Calice" in Rousseau's *Dictionary*; both authors stress

metamorphosis in plant parts. See Johann Wolfgang von Goethe, *Botanical Writings*, trans. B. Mueller, reprint ed. (Woodbridge, Conn.: Ox Bow, 1989 [1952]), 42; for Goethe's account of his debt to Rousseau's botany see the same work, 156–159. Thus it is reasonable to consider Rousseau's theory as at least a precursor of Goethe's. See commentary by Ernest-J. Bonnot on "Calice" in *Lettres sur la botanique*, ed. Bernard Gagnebin (Paris: Club des Librairies de France, 1962), 218.

69. See Georges Toscan, *L'Ami de la Nature, ou Choix d'Observations sur divers objets de la Nature et de l'Art* (Paris: Imprimerie Crapelet, 1800), 68–69. See also Pascal Duris, *Linné et la France* (Geneva: Droz, 1993), 103–114.

FIRST WALK

1. About fifteen years before this was written, that is, on June 9, 1762, the Parliament of Paris condemned Rousseau's *Emile* and issued a writ of arrest for him. He had been alerted the night before and was therefore able to flee toward Switzerland before the police came to arrest him. During the next twelve years or so, he was forced to flee one place after another and frequently subjected to unkindness. By suggesting that this position of enforced solitude has endured longer than fifteen years, Rousseau may be tracing it to the events surrounding his bitter quarrel with Mme d'Epinay in December 1757 and his subsequent departure from the Hermitage, the little house near the forest of Montmorency that she had renovated for him and offered to him in 1756. In the *Confessions*, Books IX and X, he explained how the quarrel arose and declared that all of his troubles began at about this time. See *Confessions* in *Collected Writings*, Vol. 5, 396–419, esp. 412–413; see also 485–489.

2. This probably refers to the period beginning with the forced exile from St. Peter's Island in October 1765 until the unsuccessful attempt to deposit a copy of his *Dialogues* on the altar at Notre Dame in Paris in February 1776 and would include his very strange conduct just prior to leaving England in May 1767. For an indication of Rousseau's thought about the way he was treated in England, see *Dialogues*, *Collected Writings*, Vol. 1, 63–77 and 91–97.

3. In May 1776 Rousseau made a last, futile attempt to interest others in his plight. He composed a leaflet, entitled *To All Frenchmen Who Still Love Justice and Truth*, and tried to distribute it to people passing by on the streets. To his utter amazement, most people handed the leaflet back, declaring that it was not addressed to them. This seems to be the event "as sad as it was unforeseen" to which he refers a few lines below. When he recounted this experience, Rousseau bore witness to the resignation he speaks about here and vowed that he would henceforth be calm. See *Dialogues*, "History of the Preceding Writing," *Collected Writings*, Vol. 1, 253.

Because a correct identification of the event Rousseau is referring to is closely linked to the identification of the time at which he began to write the Reveries, this reference has been extensively discussed. See *Les Rêveries du Promeneur Solitaire*, ed. H. Rodddier (Paris: Garnier Frères, 1960), pp. xiii–xlvii; and Robert Ricatte, "Un Nouvel Examen des cartes à jouer," *Annales de la Société Jean-Jacques Rousseau*, Vol. 35 (1962): 239–256.

4. The *Dialogues* carries the full title of *Rousseau, Juge de Jean-Jacques, Dialogues*. There are three *Dialogues*, preceded by an introduction which explains the

purpose of the *Dialogues* as well as why the dialogue form was chosen and followed by an epilogue which describes how Rousseau tried to insure that the writing would be safeguarded for future generations. The only two characters in these *Dialogues* are "Rousseau" and "a Frenchman." At first, the Frenchman expresses great hostility toward the terrible author who was responsible for evil books such as *Emile*, but Rousseau, who is presented as someone sympathetic to that terrible author (designated only as "Jean-Jacques"), slowly brings the Frenchman to the point of acknowledging the tender soul and true feelings of humanity characteristic of the real Rousseau. This is done by urging the Frenchman to use his own critical faculties and to read the books he has been led to believe are so evil. Although the *Dialogues* was finished in 1776, it was not published until after Rousseau's death.

5. See *Dialogues*, *Collected Writings*, Vol. 1, 1–5 and 253–256. Rousseau argued that the public treated him the way it did because it had been led to believe that he deserved to be treated in such a manner. Because he still believed that people desire to act decently and according to principle, Rousseau tried to structure the argument of the *Dialogues* in such a way as to convince them of the foolishness of their conduct toward him. The conversion of the Frenchman that takes place during the course of the *Dialogues* is an illustration of how Rousseau thought people's opinion might be changed.

6. Literally, "bodies" (*corps*).

7. The Oratorians are a society of secular priests who take no monastic vows. St. Philippe de Néri founded the society in Rome in 1564, and Pope Paul V approved the order in 1612. In France the society was organized by Pierre de Bérulle.

In the *Confessions*, Book X and Book XI, Rousseau spoke harshly of one Oratorian, Father Bertier, and of two of Bertier's acquaintances, even going so far as to accuse these acquaintances of having stolen some of his papers shortly before *Emile* was condemned. However, he also spoke with pleasure of a little picnic he had with two Oratorians at Montmorency the day before *Emile* was condemned. *Confessions*, *Collected Writings*, Vol. 5, 423–424, 477–478, and 485. Later, in the *Dialogues*, Rousseau specifically accused Father Bertier's two acquaintances of being in the service of d'Alembert and the Oratorians, in general, of having become "dangerous enemies." *Collected Writings*, Vol. 1, 191.

8. Reading "neighbors" as *prochains* with the manuscript. (Unless otherwise indicated, the readings of Raymond's 1959 edition in the Pléiade series, Pléiade, Vol. I, 993–1099, have been adopted.)

9. The French term *mon naturel* has been translated as "my natural temperament" to distinguish it from references to "my nature" (*ma nature*).

10. In his *Essays*, Montaigne claimed to write only for his own sake. See *Essays*, Vol. 1, "To the Reader."

> Reader, this is a book of good faith. From the outset, it warns you that I have sought no goal in it other than a domestic and private one. I have given no thought to serving you or to my fame. My strength is not up to such a project. I have dedicated this work to the private benefit of my relatives and friends, so that when they have lost me (which they will soon do), they might again find some trace of my states and moods and that in this way they might sustain their acquaintance with me in a fuller and livelier fashion. If I had wanted to curry the favor of the world, I would have primped more and

would have presented myself in a studied pose. I want to be seen in my simple, natural, and ordinary way without adornment or artificiality, for I am depicting myself. My defects and naive manner will be clearly visible in this work, at least to the extent that respect for public opinion permits. Had I been in one of those nations that are said to live even now in the sweet freedom of the first laws of nature, I assure you that I would quite willingly have painted myself completely, and completely naked.

Rousseau expressed a similar criticism of Montaigne in the *Confessions*, Book X *Collected Writings*, Vol. 5, 433 and 586.

11. Literally, "all their successes" (*tous leurs succès*).

SECOND WALK

1. The account in the Fifth Walk of his sojourn on St. Peter's Island and the discussion in the Seventh Walk of his various botanical forays in the neighborhood of Neuchâtel suggest that Rousseau is thinking here of the years 1762–1766. Although it was a period marked by vexing incidents and general distress, beginning as it did with the forced departure from France and ending with the attempt to find a peaceful haven in England, Rousseau did enjoy long moments of great joy during these years.

2. As he states a little later, Rousseau was living on Rue Platrière, now known as Rue Jean-Jacques Rousseau, during the period of time in which the *Reveries* was composed. This street is not far from St. Eustache Church. Rousseau would have taken the Rue du Chemin-Vert from the Rue de la Contrescarpe (now known as Boulevard Beaumarchais) up to the heights where the Père Lachaise Cemetery is now situated and then gone across the fields to the village of Charonne.

3. The *Picris hieracioides* is commonly known as hawkweed.

4. The *Bupleurum falcatum* is commonly known as hare's ear.

5. The *Cerastium aquaticum* is commonly known as chickweed or mouse-ear chickweed. It is now called *Myosoton aquaticum*.

6. Rousseau also seems to be suggesting a psychological return here, for he uses an awkward expression that carries a hint of returning to oneself. Literally, he says: "I was coming back from them to myself" (*je m'en revenais*).

7. This is probably the name of a cabaret located in the district called La Haute Borne (see n. 8).

8. La Haute Borne was the name of an area and of the street which was the continuation of the Rue du Ménilmontant after the intersection of the Rue du Bas Popincourt. The lower part of the Rue du Ménilmontant is now called the Rue Oberkampf, and the Rue du Bas Popincourt is now called Rue Saint-Maur.

9. Rousseau is referring to the old Enclosure of the Temple (Enclos du Temple) where the Priory of the Knights Templars, a military and religious order formed in Jerusalem in 1118 and abolished in 1313, and the Tower of the Temple were located. Today, only the Square du Temple remains, the Tower and the Priory having been demolished in 1811.

10. Because of the different measures prevailing in various regions and provinces, the league had no precise length in eighteenth-century France. There is some agreement, however, that it was roughly equivalent to four kilometers, that is, to

about two and one-half miles. The distance from the Square du Temple to Rousseau's home on the Rue Platrière or Rue Jean-Jacques Rousseau is almost two kilometers.

11. Apparently, a special kind of lock had been placed on Rousseau's door at the street so that anyone wishing to visit him had to ask the neighbors how to get into the building. See *Dialogues*, *Collected Writings*, Vol. 1, 42 and note.

In both passages, Rousseau refers to this lock as a *secret*. According to Littré, the word refers to special springs used for different purposes so that one might speak of the secret of a mechanism or of a lock. This very sentence of Rousseau's is cited as an example of how the word is used. See Emile Littré, *Dictionnaire de la Langue Française* (Paris: Hachette, 1958), Vol. 6; see also Joseph Botterman, "Essai sur les combinaisons méchaniques, supplément à l'art du serrurier," in *Description des arts et métiers* (Neuchâtel: Imprimerie de la Société Typographique, 1783), Vol. 19.

12. Jean-Charles-Pierre Lenoir (1732–1807) was appointed lieutenant general of police in Paris in 1774 and resigned in 1785. During his administration, many improvements were made in the city of Paris, notably the continuous lighting of the streets.

13. Charlotte Chaumet d'Ormoy (1732–1791) was the author of several short stories; the comic opera *Zelmis, ou la jeune sauvage*; and two novels, *Les Malheurs de la jeune Emilie* and *La Vertu chancelante, ou la Vie de Mademoiselle d'Amincourt*. Although she became a member of the academy of the Arcades de Rome under the name of Laurilla, Mme d'Ormoy had no great literary reputation.

14. The title of the book is *Les Malheurs de la jeune Emilie pour servir d'instruction aux âmes vertueuses et sensibles* (Paris: Dufour, 1777). On pp. ix–x of the *Introduction*, Mme d'Ormoy wrote:

> The desire to inspire the young people of my own sex with sensitivity and virtues is the second motive that pushed me to publish such a weak product, since I am very thoroughly persuaded that a woman should never write. M. Rousseau even thinks that a man should do so only when he is forced to; however, the public would have lost a great deal had he not written; I know no one whose soul is more sensitive; he is a sage who has freed himself from all needs. He is happy, and his philosophy is uncommon. I confess that this famous man is my hero; but since the praise of his virtues is above what a vulgar pen can do and since the pen of a woman is too slight a stylus to draw his portrait with, I will be quiet and will be content to admire him, while rendering him from the bottom of my heart all the homage due him. His modesty must forgive me for this; the more he disdains flattery, the more he must accept the language of truth.

15. The note mentioned by Rousseau is contained in only one edition of the book, a copy of which exists in the Rare Book Collection of the Bibliothèque Nationale in Paris.

Mme d'Ormoy's novel depicts the aristocracy as dissolute and vicious, but the harshness of her indictment suffers from her failure to offer vivid descriptions and to develop her characters fully. At one point in the book, a young nun recites her life story to Emily and in doing so asserts the injustice and the insensitivity of the sons of the aristocracy. The note referred to by Rousseau occurs just after the following, where the nun's recital is balanced by the description of a noble young

man who befriended her and was one of her suitors before she took her vows. This young man, Dorimant, is presented as an exception to every generalization about the other sons of the aristocracy:

> I have blamed myself since then for all the bad treatment my vanity caused Dorimant to suffer. This respectable friend rendered me such great services that I shall never forget them. I promised to give you a description of him. Here it is:
>
> He did not stand out in a notable way; he was ugly. But in hearing him speak, you easily forgot his ugliness; a great deal of wit corrected nature's errors. His character basically consisted in great sweetness; filled with a most uncommon honest and great compassion, he tended to the poor, especially those who, in spite of their toil and the sweat of their brow, did not have enough to eat.
>
> He performed his good deeds in hovels off in the countryside. Often he would help poor wretches reduced to the condition of animals, eating grass as their only food; or others who had only a miserable cot which was frequently seized from them because they did not have enough to pay their taxes.

The missing note begins here, at page 149 of the text. (However, due to a printing error, the page is actually numbered 159.) In the volume of the Rare Book Collection, there is a sheet with the directions: "after the word 'taxes [*impôts*]' p. 149, read the following:

> This man who cannot feed himself owes a tax to his king. How will he pay it? Without pity, they will reduce him to utter poverty: the tears of a mother and of the children by whom he is surrounded do not touch tax collectors' hearts. Humph! How could their hearts be touched! They answer for money they have not received by being deprived of their own freedom.
>
> If sovereigns only knew all the evil that is done in their name, they would shudder at being kings. Royalty should be desired only for the felicity of the people, and that is the business of a virtuous king. But it is very difficult for truth to penetrate all the way to the throne. They are careful to turn away those who might tell the truth: the king's people is dying of hunger, but they are depicted to him as being happy.
>
> My dear Emily, I am going to give you an example of this. A lord of the court (the Marquis de Souvré), a great lover of truth was with the king (Louis XV) at a time when bread was very expensive. The people of the court had assured his Majesty that morning that the price of bread had dropped. This prince, whose heart was sensitive, showed his joy about this to his dear friend when he came in; the Marquis de Souvré, astonished that they had tried to dupe the king, began to run toward the door; the king, completely baffled by his actions, said to him:
>
> "Where are you going?"
>
> "Sire, I am going to hang my head butler immediately; again today he charged me more for bread."
>
> You could not tell the truth in a more pleasant way nor better enlighten your ruler about the things being hidden from him. It is always the king's fault if he is deceived: he has only to go out in public. The cries of joy at his appearance will tell him what he wants to learn; if the voices are mute, the people are

not happy; they can speak to their king only by their silence. Usually, kings shape our virtues. We pattern ourselves after the person who holds the reins of the government. Under a virtuous king,* virtues are in a renaissance, and honest people are anxious to gather around the throne. To find virtuous people, you must look for them in modest situations. Virtue hides itself; it is incapable of acquiring anything by plotting or begging. You get to know a man in happiness and misfortune. Reverses in no way strike down his courage. Vice alone terrifies him; and if somebody who is jealous of his reputation uses slander to get the homage he deserves, he does not bother to justify himself and lets only his virtues speak. Cato the censor, who was accused forty times and always absolved, was the author of seventy condemnations. This proves that the good man is always justified, whatever interest people may have in blackening his name. With such men, we would see Trajans or Tituses be born again, and they would make their people happy.

(The asterisk is in Mme d'Ormoy's text and is reproduced at the end of the passage in this manner: * Louis XVI.)

In the *Dialogues*, Rousseau likewise claimed that this note was part of the plot and intended to bring public blame upon him. *Collected Writings*, Vol. 1, 180 note.

16. In the edition of December 3, 1776, the *Courrier d'Avignon* reports the following news from Paris as of November 21, 1776: "M. Rousseau who often walks about alone in the countryside was knocked over a few days ago by one of those Great Danes that run before fast moving carriages. He is alleged to be very sick from this fall, but his lot of having been crushed by dogs cannot be deplored too much. Now that gives rise to fine reflections about the vicissitudes of human affairs!"

However, the article to which Rousseau was probably alluding in this passage is the news from Paris as of December 12, 1776, which appeared in the December 20, 1776, issue of the *Courrier d'Avignon*: "M. Jean-Jacques Rousseau has died from the after-effects of his fall. He lived in poverty; he died in misery; and the strangeness of his fate accompanied him all the way to the tomb. It pains us that we cannot speak about the talents of this eloquent writer; our readers must sense that the abuse he made of those talents imposes the most rigorous silence on us now. There is every reason to believe that the public will not be deprived of his life story and that even the name of the dog who killed him will be found."

When giving the news from Paris as of December 21, the issue of December 31 corrected the earlier false report:

Two Swedes arriving in Paris for the first time asked the toll-collector at the city gates: 'Where does M. Fontenelle live?' The latter did not know. 'How can that be,' the two foreigners retorted 'you are French and you do not know where M. Fontenelle lives? Oh what Barbarians!' If these Swedes are not dead, what epithets would they hurl at a man who falsely announces the death of M. Rousseau? Most surely, they would call him even worse names. But if this man lived 150 leagues from the Capital he would want to clear himself from a bitter reproach and he would very likely reply to these foreigners: Gentlemen, I am terribly sorry if I injured an eloquent writer and over-alarmed the public on his behalf; but my error is quite involuntary. I was deceived by people living in the same city as he. M. Rousseau lives far away from the whirlwind of the world which makes and passes on news; they said he was dead; they wrote

me that; they made a funeral eulogy that I did not copy; I am guilty due to error, not due to intention; I therefore hasten to announce to my readers that his accident will have no after-effects and that he enjoys good health. So then perhaps these foreigners, being gentle, honest, and good, will forgive my error in light of the confession I make of it."

THIRD WALK

1. Cf. Plutarch, *Lives of Illustrious Men*: *Solon* 2.2 and 31.3; also Plato, *Republic*, 536c–d, *The Lovers*, 133c, and *Laches*, 188b and 189a.

Rousseau was apparently using the Jacques Amyot translation of Plutarch; see *Les Vies des hommes illustres*: *Solon* 3 and 65 (Paris: Gallimard, Bibliothèque de la Pléiade, 1951), vol. 1, 173 and 211. Actually, Plutarch quoted Solon as saying: "I continue to learn many things while growing old."

2. The French word is *mœurs* and connotes both morals in a precise sense and manners in a very general sense. Each time this word occurs, the way in which it is understood will be mentioned. On uses of the word by Rousseau and his contemporaries, see *Collected Writings*, Vol. 2, 203–204, n. 7.

3. When Rousseau was ten years old, he and his cousin were put into the home of Pastor Jean-Jacques Lambercier to be educated. See *Confessions*, Book I, *Collected Writings*, Vol. 5, 11–21. Jean-Jacques Lambercier (1676–1738) was the pastor of the village of Bossey, a little village close to Geneva, from 1708 until his death.

4. After running away from Geneva in 1728, shortly before his sixteenth birthday, Rousseau sought refuge with M. de Pontverre who was the priest in the nearby village of Confignon. M. de Pontverre sent Rousseau on to Annecy and the home of Mme de Warens (see n. 5). The Bishop of Annecy, Michel-Gabriel de Rossillon, then sent Rousseau to Turin where he was instructed in the Roman Catholic faith and eventually received as a member of that faith. See *Confessions*, Book II, *Collected Writings*, Vol. 5, 38–58.

5. Françoise-Louise de la Tour (1699–1762) married Sébastian-Isaac de Loys, lord of Vuarrens or Warens, at Lausanne in 1713 and left him in 1726. She took refuge at Evian and secured the help of Victor Amédée, king of Sardinia. Shortly thereafter she converted to the Roman Catholic faith and moved to Annecy. See *Confessions*, Book II and Book V, *Collected Writings*, Vol. 5, 42 and 165–166. For a fuller statement about Rousseau's relationship with Mme de Warens, see Tenth Walk.

6. François de Salignac de La Motte Fénelon (1651–1715) became archbishop of Cambrai in 1694. Shortly afterward, he was condemned for heresy by the Holy Court of Rome because his theological teachings placed too much emphasis on a mystical experience of God's presence. In the heated debate that preceded the condemnation, these views were characterized as a doctrine of pure love and labeled "quietistic" by Fénelon's detractors. In his book *Explications des maximes des saints sur la vie intérieure*, Fénelon gives the best account of these views. Although he submitted to the condemnation, Fénelon maintained his interest in mysticism and subsequently developed a mystical theology which has never been condemned by the church. In this reference to Fénelon, Rousseau seems to be thinking of the popular notion of Fénelon's early mysticism.

7. Shortly after the success of the *First Discourse*, Rousseau began to think about changing his way of life. At that time, he was working as a secretary for Mme Dupin and her stepson, Charles-Louis Dupin de Francueil. M. de Francueil was a great benefactor of Rousseau and in his role as a receiver general of finances appointed Rousseau as cashier of finances. This is the post for which Rousseau did not think he was suited and which he resigned at the moment of his major reform. The account of his reform in dress given here is very similar to that given in the *Confessions*, Books VIII and IX (*Collected Writings*, Vol. 5, 298–299, 303–305, and 349–351; see also Confessions, Book VII, *Collected Writings*, Vol. 5, 246 and 286–287 for an account of his deeper relationship with M. de Francueil). In the second letter to M. de Malesherbes, Rousseau speaks of this same reform (*Collected Writings*, Vol. 5, 575–576). Here, as elsewhere, Rousseau's dating is approximate. Since the reform took place in 1750 or 1751 and Rousseau was born in 1712, this could not have been after he reached forty.

8. This is a literal translation of the French word *sentiments*. Although the word is sometimes used to mean opinions or beliefs, as in the present context, it is so important to the central theme of the *Reveries*—Rousseau's identification of happiness as "the sentiment of existence" (*le sentiment de l'existence*)—that it will always be translated as "sentiment" or "feeling."

9. In *Emile*, Rousseau introduces religious matters by having a Savoyard priest speak of his own religious views. Rousseau supposedly heard this very teaching from a priest when he was slightly older than Emile. See *Emile* (Bloom edition), Book IV, 260–313.

Much of the public furor over *Emile* can be traced to the reaction that Catholics and Protestants alike had to this religious teaching and to what they took to be its political implications.

FOURTH WALK

1. Plutarch, *Moralia*: "How to Profit from One's Enemies." In trying to explain himself to M. de Malesherbes, Rousseau spoke about the influence Plutarch had on him: "When I was six years old, Plutarch fell into my hands, at eight I knew him by heart; before the age at which the heart takes an interest in novels, I had read them all, they had made me shed buckets of tears. From this was formed in my heart that heroic and romantic taste which has done nothing but increase up to the present, and which ended by disgusting me with everything, aside from what resembled my follies." *Four Letters to M. de Malesherbes*, *Collected Writings*, Vol. 5, 574. See also *Confessions*, Book I, *Collected Writings*, Vol. 5, p. 8 and *Dialogues*, *Collected Writings*, Vol. 1, 123.

2. This Latin phrase, "to the one who consecrates his life to truth," was used to dedicate the copy of the journal to Rousseau. It is a modification of the verse from Juvenal (*Satires*, 4.91) which Rousseau took as his motto: *vitam impendere vero*, that is, "to consecrate one's life to truth." He first used the motto in the *Letter to M. D'Alembert*; see *Politics and the Arts, Letter to M. d'Alembert on the Theatre*, trans. Allan Bloom (Ithaca: Cornell University Press, 1960), 131 and note. In *Emile*, just before presenting the religious teaching which he placed in the mouth of a Savoyard Vicar, Rousseau assured the reader that he was mindful of his motto; see

Emile (Bloom edition), Book IV, 260, and Third Walk. Similarly, when he published the *Letters Written from the Mountain* in 1764, he placed this motto on the title page.

More than likely, Rousseau's phrase, "one of the journals of the Abbé Rosier," is a reference to the August 1776 issue of *Observations sur la Physique*, edited by Abbé François Rozier. (Although Rozier is the correct spelling of the name, Rousseau consistently spelled it "Rosier." I have preserved his spelling in the text.) Rozier may have sent this issue of the journal to Rousseau because it contained an announcement about the formation of a Society for the Arts in Geneva accompanied by an announcement that each year the society would sponsor a contest for essays written in response to questions "whose solution appears most important for improving Arts and Economics" and would give an award for the best essay; see *Observations sur la Physique* (August 1776), 145–51.

Abbé François Rozier (1734–1793) was primarily interested in botany and agriculture. An author of many books on these subjects, especially the frequently reprinted *Cours Complet d'Agriculture*, he became editor of the *Journal de Physique et d'Histoire Naturelle* in the late 1760s and changed its title to *Observations sur la Physique, sur l'Histoire Naturelle, et sur les Arts* in 1771.

3. Reading *ma* with the manuscript.

4. Rousseau is referring to the time shortly after his religious conversion when he was still in Turin and employed in the household of the Comtesse de Vercellis. In the confusion following her death, Rousseau stole one of her ribbons; he claimed that he stole it as a keepsake. The ribbon was declared missing by the chambermaid of the comtesse and found among Rousseau's personal effects. Interrogated before all the members of the household, Rousseau's mortification led him to deny having stolen the ribbon and to insist that a young kitchen maid, Marion (whose name is mentioned later in this walk), had given it to him. He persisted adamantly in his tale and told it so convincingly that Marion's denials were not believed; because of the doubt about the true culprit, both Rousseau and Marion were dismissed. Evidence that this lie did haunt him throughout his life is that it is presented in the *Confessions* as one of the three great and painful *Confessions* he felt obliged to make as proof of his veracity (*Confessions*, Book II, *Collected Writings*, Vol. 5, 67–73, esp. 71–73; and *Confessions*, Books I and III, *Collected Writings*, Vol. 5, 13–16 and 108).

5. This and the next two sentences are found on the margin of the manuscript.

6. Rousseau's punctuation.

7. Reading *elles* with the manuscript.

8. Montesquieu published the *Temple de Gnide* (*Temple of Cnidus*) in 1725. He took every possible precaution to keep the work from being attributed to him. Cnidus, located in Caria in Asia Minor, was devoted to the worship of Aphrodite; the temple contained a famous statue of the goddess by Praxiteles. See Pliny, *Natural History*, xxxvi.4.20.

9. Rousseau's emphasis here and throughout the paragraph.

10. Reading *et* with the manuscript.

11. See n. 4.

12. Nothing is known of M. Foulquier, and except for the assertion that the person referred to here as Dame Vacassin was really named Vaucassin, nothing is

known of her. For this assertion, see Comte Antoine-Joseph Barruel-Beauvert, *Vie de J.-J. Rousseau* (London, 1789), 377.

All that is known of M. Benoit is that he handled the manuscripts relating to music for the posthumous edition of Rousseau's works. According to letters discovered by Spink, the manuscript of the Reveries was altered at Benoit's insistence: since it was he who had introduced Foulquier to Rousseau, he felt slighted by being referred to here only as Foulquier's friend and prevailed upon the Marquis de Girardin, at whose home in Ermenonville Rousseau died and who had possession of the manuscript of the *Reveries* for some time, to strike the words *son ami* (his friend) from this passage. That emendation has now been corrected. See J.-J. Rousseau, *Les Rêveries du Promeneur Solitaire*, ed. J. S. Spink (Paris: Société des Textes Français Modernes, 1948), 78, note 2, and xlv–xivi.

Rousseau's wife was Marie-Thérèse Le Vasseur (1721–1801). They lived together from 1745 until Rousseau's death in 1778 and were married in 1768.

13. For some time prior to 1761, Marc-Michel Rey, Rousseau's editor, had been urging him to write his memoirs (see First Walk, n. 10), but Rousseau did not actually begin to write them until around 1764 when he was at least fifty-two years old.

14. From here until the end of the walk, the handwriting in the manuscript is small and almost cramped, as though Rousseau added this section afterward.

15. Antoine Fazy (1681–1731) became a resident of Geneva in 1701. He had learned how to manufacture printed cotton in Holland and founded his own factory at Les Pâquis in 1706. Les Pâquis was a few miles north of the city walls on the lake at that time; today, it is part of Geneva.

16. Torquato Tasso, *Jerusalem Delivered*, 2.22:

Magnanimous lie! Now when is the truth so
beautiful that it can be preferred to thee?

The context should be examined.

17. Pall-mall is something like croquet: a ball of boxwood was hit with a wooden mallet toward a raised ring at the end of an alley, the object being to drive the ball through the ring with the fewest number of strokes.

Plain-Palais is a large esplanade that has been part of Geneva since its earliest days. Located between the Rhône and the Arve rivers, Plain-Palais was outside the southern walls of the city at the time of Rousseau's youth and could be reached by the Porte Neuve. What exists of the esplanade today is a large area somewhat resembling a parallelogram bordered by the Avenue du Mail, the Avenue Henri Dunant, and the Boulevard Georges Faron. Nothing is known of Rousseau's friend Pleince.

18. See Third Walk, n. 1.

FIFTH WALK

1. Rousseau's parenthesis.

2. Rousseau's house in Môtiers was attacked in the middle of the night of September 6, 1765, by people throwing rocks. The damage was so extensive and the hostile intention so evident that he left Môtiers as soon as possible.

After fleeing from Montmorency on June 9, 1762, Rousseau had gone to Yverdon to visit his old friend Daniel Roguin. Although Roguin eventually persuaded

him to remain in Yverdon, even offering him a little house in his garden, the authorities would not permit him to stay there. Yverdon was within the territory of Bern and thus subject to the Senate of Bern, which ordered that Rousseau be expelled from all of its territory by July 9.

Roguin's niece, Madame Julie-Ann-Marie Boy de la Tour, then offered Rousseau her son's house in Môtiers. Located in the Val-de-Travers, Môtiers was part of the county of Neuchâtel and under the sovereignty of Frederick II. Rousseau was given permission to stay in Môtiers and about a year later was even provided with a letter of naturalization. However, shortly after the publication of the *Letters Written from the Mountain*, the people of Môtiers began to show hostility toward Rousseau. This hostility culminated in the September 6 attack on his house. See *Confessions*, Books XI and XII, *Collected Writings*, Vol. 5, 491–533.

3. David Hume took an interest in Rousseau's difficulties from the beginning, either because of his friendship with Comtesse Marie-Charlotte de Boufflers and Marquise Marie-Madeleine de Verdelin, ladies who were on warm terms with Rousseau, or because of his acquaintance with the *Encyclopédistes*. At any rate, he communicated an offer of hospitality to Rousseau by means of Mme de Boufflers and Mme de Verdelin and wrote Rousseau a number of times to renew his offer. Rousseau finally went to England in 1766, accompanied by Hume. Sometime later he quarreled violently with Hume and eventually left England convinced that the whole attempt to induce him to seek refuge in England was part of the plot to discredit and harass him and that all those who had urged him to go to England were members of the plot. He arrived in London on January 13, 1766, and returned to France on May 25, 1767.

4. Rousseau arrived at St. Peter's Island on September 12, 1765. On October 16, the Petit-Conseil of Bern ordered him to leave the island and the territory. Despite his request that he be held in captivity on the island, he was ordered to leave immediately and did so on October 25. See *Confessions*, Book XII, *Collected Writings*, Vol. 5, 541–542. Rousseau's account of his sojourn on St. Peter's Island in the *Confessions*, Book XII, *Collected Writings*, Vol. 5, 533–542, should be compared with the account given here.

5. Italian expression: "to do nothing" or "doing nothing."

6. Jean-Antoine d'Ivernois (1703–1765) was a medical doctor and botanist; he made a catalogue of the flora of the Neuchâtel Jura Mountain region. Rousseau made his acquaintance at Môtiers in 1764, and d'Ivernois introduced him to botany and to the work of Linnaeus (see n. 8).

7. That is to say, the flora of St. Peter's Island. Books about the flora of a region were frequently given such titles.

8. Carl Linnaeus (1707–1778) is famous for having introduced efficient procedures for the naming and classifying of plants and animals at a period when rapid discoveries of new species were occurring. In 1735 his work on the naming and classifying of plants, *Systema naturae*, appeared.

9. Rousseau has substituted the Book of Habakkuk for the Book of Baruch. Apparently, Racine once tried to instill religious sentiment in La Fontaine, but succeeded only in inspiring him with a passion for Baruch. In describing La Fontaine and the incident, Racine's son, Louis, says:

> Either he simply would not speak or else would want to speak only about

Plato, whom he had carefully studied in Latin translation. He sought to know about the ancients by conversation and benefited from conversing with my father who sometimes gave him selections from Homer to read in Latin translation. There was no need to make him feel the beauty of it; he seized it: everything which was beautiful struck him. One day my father took him to vespers and, noticing that the service seemed too long for him, gave him a volume of the Bible containing the lesser prophets so as to occupy him. He fell upon the prayer for Jews in Baruch and, his admiration for Baruch driving away his restlessness, he said to my father: "Baruch was a real genius. Who was he?" The next day and for several days afterwards, whenever he met someone he knew in the street, after the customary greetings he would raise his voice and say: "Have you read Baruch? He was a real genius."

Mémoires sur la Vie et les Ouvrages de Jean Racine, in *Œuvres complètes de Jean Racine* (Paris: Lefèvre, 1820), Vol. 1, cxl–cxli.

10. The Argonauts were the warriors who sailed to Colchis under the leadership of Jason in quest of the Golden Fleece.

11. The interval is really only twelve years, for the Fifth Walk was probably written in 1777.

12. Rousseau's emphasis.

13. The verb is *offusquer* (literally, "to obfuscate") and has been translated elsewhere in the text as "to cloud."

SIXTH WALK

1. Rousseau added this sentence to the manuscript. it does not appear that he intended it to be a separate paragraph for he made no attempt to set it apart in such a manner.

2. In Rousseau's time the new boulevards were shaded avenues that ran from the Observatoire to the Hôtel des Invalides. Today they would consist of that part of Boulevard Raspail running from Place Denfert-Rochereau to Boulevard Montparnasse, Boulevard Montparnasse from that point on to its intersection with the Boulevard des Invalides, and the Boulevard des Invalides itself. The Enfer tollgate was a little north of what is now Place Denfert-Rochereau. The road to Fontainebleau was the Chemin du Petit-Montrouge, which is now the Avenue du Général Leclerc. Rousseau probably took the Rue d'Enfer (which would now correspond to the Boulevard Saint-Michel) and then, turning aside and crossing the Nouveau-Cours (which would today be that part of Boulevard Montparnasse running from Boulevard Raspail to Boulevard Saint Michel), reached the Chemin du Petit-Montrouge, which he could have followed to the bluffs of Gentilly along the Bièvre near what is today the site of the Cité Universitaire and the Parc de Montsouris. The Bièvre is now completely covered from Arcueil to the Pont d'Austerlitz.

3. To the best of my knowledge, this reflection occurs not in the *Emile*, but in the *Confessions*, Book V (*Collected Writings*, Vol. 5, 160).

4. The next two sentences are in the text itself, but have been crossed out with a red pencil, apparently by one of the early editors. The passage immediately after these two sentences—"Thus it is that Abbé de Binis . . . white to black," is in the

margin and has also been crossed out with a red pencil. This, too, seems to have been done by one of the early editors.

5. François-Joseph de Conzié (1707–1789) was Comte des Charmettes and Baron d'Arenthon. In Chambéry he became friendly with Mme de Warens (see Third Walk, n. 5) and eventually persuaded her to become his neighbor at Les Charmettes. M. de Conzié had received a very fine education and had built up an excellent library. He became acquainted with Rousseau in 1734 or 1735 by taking music lessons from him, but music soon gave way to discussions about philosophical and literary questions as the acquaintance blossomed into a deep friendship. In the *Confessions*, Book V, *Collected Writings*, Vol. 5, 179–180, Rousseau spoke of M. de Conzié with affection and respect. However, sometime later, Rousseau added the following note in the margin of the Paris manuscript of the *Confessions*: "I have seen him since and I have found him totally transformed. Oh what a great magician M. de Choiseul is! Not one of my old acquaintances has escaped his metamorphoses." See also *Confessions*, Book VI, *Collected Writings*, Vol. 5, 195.

Two of M. de Conzié's cousins were bishops: Louis-François-Marc-Hilaire, bishop of Saint-Omer in 1766, then of Arras; and Joachim-François-Mamert, bishop of Saint-Omer in 1769 (after his brother went to Arras).

6. Etienne-François, Duc de Choiseul (1719–1785) became the minister of foreign affairs in France in 1758; in 1761, he also became war minister and minister of the navy. For at least ten years he was the real ruler of France, and in the *Social Contract* (Book III, chap. vi, para. 9), Rousseau sought to praise him for his wise rulership by an oblique compliment (*Collected Writings*, Vol. 4, 178).

Rousseau later came to believe that the Duc de Choiseul was offended rather than pleased by this remark and that joining with Mme de Boufflers, Mme de Verdelin (see Fifth Walk, n. 3), and others in the plot against him, he eventually became the leader of the whole group. See *Confessions*, Books XI and XII, *Collected Writings*, Vol. 5, 463, 478, 482–483, and 547; Letter to M. de Saint-Germain of February 26, 1770, in Leigh, Vol. XXXVII, 248–271; and *Dialogues*, *Collected Writings*, Vol. 1, 205.

7. Abbé Palais was an organist from the Piedmont region of Italy whom Rousseau met in Chambéry between 1732 and 1734. He and Rousseau discussed music, and he played the harpsichord at the concerts which were given at the home of Mme de Warens under Rousseau's direction. It is not known how he became obligated to Rousseau. See *Confessions*, Book V, *Collected Writings*, Vol. 5, 155.

8. Abbé de Binis had served as an undersecretary at the French embassy in Venice prior to Rousseau's arrival. During the time Rousseau held the post of secretary to the ambassador (September 1743–August 1744), Abbé de Binis worked with him as an undersecretary. In the *Confessions*, Rousseau spoke of his generosity toward Abbé de Binis and of their good relationship. Nothing else is known of him. See *Confessions* Book VII, *Collected Writings*, Vol. 5, 248 and 251.

9. Reading *beaux bénéfices* with the manuscript, but the words are nearly illegible.

10. Paul Moultou (1725–1787) and Rousseau met in 1754 when Rousseau returned to Geneva for a visit. Rousseau was so moved by the republican spirit of the city that he decided to embrace the Protestant faith again and be readmitted as a citizen. Moultou became a pastor in 1755, but resigned from the ministry in 1762

to defend Rousseau when *Emile* was condemned. Although Rousseau had some reservations about Moultou, he was very fond of him and in 1778, just a few months before his death, gave Moultou a number of manuscripts to be published only after his death. For a remark from the *Confessions* illustrating these ambivalent feelings about Moultou, see Book VIII, *Collected Writings*, Vol. 5, 331 and 323.

11. If the reference to "twenty years of experience" was meant literally, Rousseau must have considered his troubles to have begun even earlier than the condemnation of *Emile*. (See First Walk, n. 1.) His bitter quarrel with Mme d'Epinay in December 1757 and subsequent departure from the Hermitage was followed by a complete break with Grimm and by a public declaration that his friendship with Diderot was over (see *Preface* to the *Letter to M. d'Alembert*, trans. Allan Bloom [Ithaca: Cornell University Press, 1960], 7 and note). In later years, Rousseau viewed Grimm as particularly malevolent and blamed him as the major cause of his troubles (*Confessions*, Books IX and X, *Collected Writings*, Vol. 5, 397–419, esp. 413; and *Dialogues*, *Collected Writings*, Vol. 1, 206–207).

When he left the Hermitage, Rousseau moved to a house offered him by the Prince de Condé in the garden of Mont-Louis near the village of Montmorency. Except for a brief stay at the Petit-Château of Montmorency belonging to the Maréchal de Luxembourg while the house at Mont-Louis was being repaired, Rousseau lived in this house until he was forced to leave France in 1762.

12. According to the story he told in the *Confessions*, Rousseau's trust was not betrayed until June 1754 when he was forty-two years old. At that time, he traveled to Geneva with Thérèse and an old friend, Jean-Vincent Capperonier de Gauffecourt (1691–1766). During the trip, Rousseau would frequently get out of the carriage and walk. After a few days, Thérèse insisted upon joining him. Although he tried to prevent her from doing so and scolded her for being so headstrong, she refused to ride in the carriage if he were not in it. Finally, Thérèse explained: whenever Rousseau got out to walk, his friend would try to seduce her by offering her his purse of money or by reading to her from an erotic book and showing her the pictures in it. Rousseau was overwhelmed by this incident and spoke of it in the following terms: "I must mark this trip as the epoch of the first experience which, up to the age of forty-two which I was at that time, damaged the fully trusting natural disposition with which I was born, and to which I had always abandoned myself without reserve and without disadvantage." See *Confessions*, Book VIII, *Collected Writings*, Vol. 5, 327.

13. See Plato, *Republic*, 359d–360b. When the ring is first mentioned in the *Republic*, it is identified as a ring possessed by an ancestor of Gyges, the king of Lydia. This ancestor had found a corpse with a gold ring on its hand and had taken the ring. He soon discovered that by turning the setting of the ring toward the inside of his hand, he would become invisible. Taking advantage of the ring's powers, he committed adultery with the king's wife, killed the king with her help, and made himself ruler. Later in the *Republic*, the ring is referred to again; it is then called the ring of Gyges (ibid., 612b).

Concerning Gyges, see Herodotus, *Histories*, i.8–14.

14. In about 1260, a Dominican monk by the name of Jacobus de Voragine made a compilation of the lives of the saints and of their miraculous deeds. Originally *entitled Historia sanctorum* or *Legenda sanctorum*, the compilation became so

popular that by the fifteenth century it had earned the title *Legenda aurea* or *Golden Legend*.

15. The deacon François de Paris (1690–1727) was a fervent Jansenist who lived in a log cabin and suffered numerous hardships so that he could give his income to the poor. He was buried in the cemetery of the church of Saint-Médard. Around 1730, it was reported that many miraculous healings had occurred at his tomb. It was said that people would have convulsions at the tomb, predict the future, and then be cured. To attest to the miraculous character of these events, women submitted themselves to trials: they would be beaten, put on crosses, and stabbed with swords; allegedly, they were hurt by none of these trials. However, because of the disruption surrounding all of this activity and because of its potential harm, the authorities closed the cemetery in 1732.

16. The manuscript reads "J.J."

SEVENTH WALK

1. Reading *vendu* with the manuscript.

2. Johannes-Andreas Murray (1740–1791) was born in Stockholm and studied in Uppsala where he was encouraged by Linnaeus to devote his efforts to botany. He eventually became a professor of medicine and director of the botanical garden of the University of Göttingen. In 1774, he published *Linnaeus' Systema vegetabilium*, writing an introduction to that work; this introduction is the *Regnum vegetabile* referred to here. in general, Murray's botanical studies were pharmacological in nature and gave rise to similar kinds of research.

3. When *Emile* was condemned by the French Parliament on June 9, 1762, and Rousseau was obliged to flee, he was "forced, despite [him]self to concern [him]self with his sad situation." This event occurred slightly less than three weeks before his fiftieth birthday. Strange as it may seem for him to speak of having had reveries from his earliest childhood, it is quite consistent with the claims he made in the *Confessions* (Book I, *Collected Writings*, Vol. 5, 7–8) about the way his fertile imagination was developed in his early years.

In other passages of the *Confessions* (especially Book IX, *Collected Writings*, Vol. 5, 365–366), Rousseau described how his fertile imagination and his reveries helped him see through the clouds that enveloped his age and allowed him to discern clearly the natural order he described in his writings. See also ibid., Books VIII and IX, 325–326 and 357–359.

4. Theophrastus (ca. 372–287 B.C.E.) was born at Eresos in Lesbos. A student of Plato and Aristotle, he eventually succeeded Aristotle as head of the Lyceum. He was primarily interested in natural history and especially in botany. Two of his botanical writings have come down to us: *Enquiry into Plants* and *Aetiology of Plants*. He was perhaps the first to apply a system of classification to the vegetable world. However, he is best known to us not for his works on botany, but for his *Characters*.

5. Dioscorides Pedanius (fl. 60 C.E.) was born in Anazarbos near Tarsus in Cilicia and is known as a botanist, physician, and pharmacologist. His major work, *De Materia medica*, is a description of drugs derived from plant, animal, and mineral origins and of their uses. This five-volume work is especially important for its

extensive description and systematic ordering of plants. Originally written in Greek, it was translated into several languages and commented on by the Greeks, the Latins, and the Arabs. Until the time of Rousseau, the fame of Dioscorides far surpassed that of Theophrastus.

6. Reading *gale* with the manuscript.

7. Literally, "at the home of the common mother" (*chez la mère commune*).

8. Reading *ressource* with the manuscript.

9. The French word is *mœurs*; see Third Walk, n. 2. In this context, Rousseau obviously means the manners or habits of animals, not their morals.

10. The manuscript reads "J.J."

11. Rousseau must have made this excursion sometime during his stay at Môtiers (see n. 17 and notes 19–22 with text). M. d'Escherny (see n. 20) identifies Justiciary Clerc as M. Leclerc and says that in addition to being a justiciary of the Val-de-Travers region, he was a country doctor and somewhat interested in botany; *Mélanges de littérature, d'histoire, de morale et de philosophie* (Paris: Bossange et Masson, 1811), Vol. 3, 46.

The farm of Justiciary Leclerc was probably located on the north slope of Mount Chasseron (see n. 22). Using the dialect of the region, Rousseau identifies it as a mountain farm (*montagne*).

12. This is commonly known as the seven-leaved toothwort. It is now called *Cardamine heptaphylla*.

13. This plant is commonly known as the sowbread.

14. The full name of this plant is *Neottia nidus-avis*, otherwise known as the bird's-nest orchid.

15. Commonly known as the broad-leaved laserwort, this plant belongs to the *umbelliferae* family (see Second Walk, n. 4).

16. This plant is commonly known as the club moss.

17. Frédéric-Guillaume de Montmollin (1709–1783) became pastor of Môtiers in 1742 and kept that position until his death. When Rousseau first arrived in Môtiers, he asked Montmollin for permission to receive communion; his request was granted after Rousseau agreed to a few formalities. Rousseau thought that he and Montmollin were on good terms and was therefore surprised when Montmollin came to him shortly after the publication of the *Letters Written from the Mountain* and asked him not to participate in the next communion service. When Rousseau refused this request, Montmollin sought to have him censured or excommunicated. The enterprise failed, and Montmollin apparently tried to use his pulpit to stir up the populace against Rousseau. In Rousseau's mind, Montmollin was primarily responsible for the events which forced him to leave Môtiers (see Fifth Walk, n. 2). See *Confessions*, Book XII, *Collected Writings*, Vol. 5, 506–532, esp. 522–529.

18. In Rousseau's time, the Rue St. Antoine was an unusually wide and long street for Paris. It started at the Porte de St. Antoine next to the Bastille and ran past one side of the Place des Vosges or Place Royale and several large private houses in what was then a very fashionable section of the city.

19. Pierre-Alexandre Du Peyrou (1729–1794) met Rousseau at Colonel de Pury's house (see n. 21) near Môtiers, and they became very close friends. When Rousseau was on St. Peter's Island and having financial difficulties, Du Peyrou

came to his aid by taking the place of the company that had just abandoned the publication of Rousseau's *Œuvres complètes*. Rousseau gave him all the necessary manuscripts and papers, including what had been completed until then of his memoirs, and asked only that Du Peyrou publish none of this until after his death. In return, Du Peyrou agreed to pay Rousseau an annuity for the rest of his life and acted as a general manager for Rousseau's other income. Rousseau's confidence in Du Peyrou was so complete that when he was eventually forced to leave St. Peter's Island, he placed his personal papers in his care.

After Rousseau's death, Du Peyrou, Moultou (see Sixth Walk, n. 10), and Girardin sold all the works that would be included in an "authentic collection of Rousseau's writings" to the Société Typographique de Genève and gave the money from the sale to Thérèse. In 1780, the Société Typographique began to publish Rousseau's works.

In the *Confessions*, Rousseau speaks very warmly of Du Peyrou and seems to have had only a passing doubt about his friend's sincerity; Books VI and XII, *Collected Writings*, Vol. 5, 190, 504–505, 529–535, and 546.

20. Comte François-Louis d'Escherny (1733–1815) first met Rousseau in Paris in 1762, but established a friendship with him only in Môtiers during the spring of 1764. In his later years, d'Escherny became a rather prolific author and published a book entitled *De l'Egalité*, which he prefaced with a ringing praise of Rousseau. The third volume of his *Mélanges de littérature* contains a long essay on Rousseau, "De Rousseau et des Philosophes du XVIII Siècle" ("On Rousseau and the Philosophers of the 18th Century") in which he speaks of the different botanical excursions he made with Rousseau and especially of this one (see pp. 41–47 and 65–77).

21. Abraham de Pury (1724–1807) had served as an officer for the kingdom of Sardinia. Rousseau visited him frequently at his farm near Môtiers, and he was very helpful to Rousseau when Pastor Montmollin (see n. 17) was trying to bring excommunication proceedings against him. See *Confessions*, Book XII, *Collected Writings*, Vol. 5, 504, 525–526, and 532.

22. From the top of Mount Chasseron (1,609 meters) in the Jura Mountain range, it is possible to see the lakes of Neuchâtel, Bienne, Morat, Geneva, Joux, Brenet, and Saint-Point.

23. According to a note that Du Peyrou put into the 1782 edition of the *Reveries*, the bookseller's house was actually on Mount Chasseral. Mount Chasseral, about as high as Mount Chasseron, is also in the Jura Mountain range near Neuchâtel.

24. After leaving England in 1767, Rousseau spent almost a year at Trye, which is near Gisors in Normandy, and then went to Grenoble for about a month (July 11–August 12, 1768). In August, he moved to Bourgoin, which is almost midway between Grenoble and Lyon. He stayed there until the following January, when he moved to a farm in Monquin, a village just outside Bourgoin. Monquin was his residence from January 1769 until April 1770, when he went to Lyon for a short time and finally moved to Rue Platrière in Paris in June 1770.

25. Gaspard Bovier (1733–1836) was a lawyer in the Parliament of Grenoble. Rousseau's friends had asked Bovier's father to assist Rousseau during his visit to Grenoble and to help him find a place to live, if he decided to settle there. Bovier

later wrote a lengthy account of the relations he had with Rousseau during his stay in Grenoble. This account, entitled "Journal du séjour de Jean-Jacques Rousseau à Grenoble sous le nom de 'Renou'" ("Diary Concerning Jean-Jacques Rousseau's Stay in Grenoble under the Name of 'Renou'") and a number of other documents relating to Rousseau's stay in Grenoble were published by Ernest Jovy as *Un Document inédit sur le séjour de Jean-Jacques Rousseau à Grenoble en 1768* [*An Unpublished Document about Jean-Jacques Rousseau's Stay in Grenoble in 1768*] (Extract from the *Mémoires de la Société des Sciences et des Arts de Vitry-le-François*. J. Denis, 1898). Although Jovy was the first to publish Bovier's own account, others had tried to defend Bovier against the implications of the story. For example in his *Réflexions sur les Confessions de J.-J. Rousseau*, Joseph M.-A Servan, a friend of Bovier's who was in Grenoble during Rousseau's sojourn, described Bovier's character and tried to show why the incident could not have taken place as Rousseau described it. His account appeared as an article in the *Journal Encyclopédie* of 1783 (pp. 17–44) and was published separately in Paris the same year. In 1852 Auguste Ducoin used Bovier's account to show the errors in Rousseau's story and its characterization of Bovier; *Particularités inconnues sur quelques personnages des XVIII et XIX siècles: I. Trois mois de la vie de Jean-Jacques Rousseau, Juillet–Septembre, 1768* [*Unknown Details about Some Well-Known Figures in the 18th and 19th Centuries: I. Three Months in the Life of Jean-Jacques Rousseau, July–September, 1768*] (Paris: Dentu et France, 1852).

26. This is the scientific name of the plant Rousseau referred to earlier as "thorny willows" (*saules épineux*). It is also called the sea buckthorn and is a spiny shrub or small tree. The leaves are narrow and lance-shaped and are covered with silvery scales. Its fruit is round and pale orange and is grouped along the stem on short stalks.

According to Bovier's account of this incident, he had indeed asked Rousseau whether these berries were safe to eat and had been assured by him that they were. Bovier also insisted that no third person joined them during this excursion. See Jovy, *Un Document inédit*, 42–43.

M. Grieve's *A Modern Herbal* (Thetford: Lowe and Brydone, Ltd., 1931), 137, states that the plant is *Hippophae rhamnoides* and that its fruit, because of a pleasant-tasting acidity, is made into a jelly by the people of Tartary and into a fish sauce by the inhabitants of the Gulf of Bothnia. She adds, however, that the fruit is considered poisonous in some parts of Europe. The name, *Hippophae*, is derived from Greek words meaning "giving light to a horse," apparently because of its supposed powers for curing a certain kind of blindness in horses.

Rousseau's belief in the salubrity of pleasant-tasting natural products taken in moderation appears erroneous when the consequences of eating mushrooms or certain kinds of wild black cherries are considered. Rousseau may have made this generalization because he was thinking of alkaloids, which always have an unpleasant taste.

27. The French word is *optique*. This was an instrument something like a stereoscope, the predecessor of the stereopticon, that was very popular in the eighteenth century. It was a box fitted with a mirror and magnifying lens. The *optique* was used to look at vividly colored prints which took on a great variety of perspectives as they were viewed.

EIGHTH WALK

1. After the clause "I somehow forgot even myself," Rousseau had written "But it seems to me that what takes place outside of us can only offer passing distractions which let us fall back into this world impotent; and it is when we savor what is within ourselves and again find our soul in order, that we can draw forth truly sure enjoyment and savor a continuous happiness." These two sentences were then crossed out. The text of the rest of this paragraph and of the next paragraph is very difficult to decipher.

2. Reading *fauteur* with the manuscript.

3. This sentence is at the top of the folio and interrupts the first sentence of the following paragraph; that is, it comes after the words "forces us." The words "beneath the" have been added for sense.

4. Reading *en vain* with the manuscript.

5. In the manuscript, a new folio begins here. At the top of this folio, before the continuation of the text, are two sentences which are separated from each other and from the text by heavy black lines, but which are not crossed out:

> However sad the lot of my last days might be and whatever men might be able to do, when I have done what I ought, they will not prevent me from living and dying in peace.
>
> What I do know is that the Supreme Arbitrator is powerful and just, that my soul is innocent, and that I have not deserved my lot.

6. Reading *succès* with the manuscript.

7. The phrase from the beginning of the paragraph to this point has the sense of one long conditional sentence. Literally, it begins "But when . . ." and a conditional "when" (*quand*) is used to tie each subsequent clause to the preceding one. The apodosis begins at "Then I . . . ." For the sake of clarity, it was decided to omit the conditional conjunctions and to break the phrase into separate sentences. Although Rousseau's own punctuation broke the interdependence of the clauses, it did so without providing any answer to the conditional phrases. He also failed, contrary to all rules of grammar, to put an "I" before the verb "began."

8. Two readings are possible here because there is some doubt about what has been crossed out. Equally strong arguments can be given for reading "which reach him" as for "which he receives."

9. This word has been added because there is no verb in the manuscript here. Most French editors have inserted the word "die" (*mourir*), but that seems too extreme given the context.

10. Rousseau broke the interdependence of these two clauses by making two sentences at this point.

11. Reading *burdes* or *bourdes*; see Henri Roddier, ed., *Les Rêveries du promeneur solitaire* (Paris: Garnier Frères, 1960), 115, n. 1.

12. Reading *un geste* with the manuscript.

13. See Fifth Walk, esp. pp. 46 and 47–48.

NINTH WALK

1. This first paragraph seems to have been added afterward. It is on the verso side of folio 17. On the recto side of folio 18 is the title of the Ninth Walk, and the walk begins with the words "Three days ago . . . ."

2. This probably refers to Rousseau's fellow Genevan Pierre Prévost (1751–1839), who visited Rousseau frequently during the last eighteen months of his life.

3. This eulogy was presented in the form of a letter to Condorcet; see *Lettre à M. de Condorcet sur Madame Geoffrin* in *Œuvres philosophiques, historiques, et littéraires de Jean Le Rond d'Alembert* (Paris: Jean-François Bastien, 1805), Vol. 14, 239–62.

Marie-Thérèse Rodet (1699–1777) married François Geoffrin at the age of fourteen. For almost thirty years, Mme Geoffrin reigned over one of the most popular *salons* in Paris. Her home on the Rue St. Honoré was constantly frequented by men of letters, artists, diplomats, and people of high rank, and she was on very good terms with d'Alembert as well as with other Encyclopédistes. In addition to a reputation for concern for others, Mme Geoffrin was known for her generosity, pleasant wit, and charm.

4. The passage in question reads:

> Madame Geoffrin had all the tastes of a sensitive and sweet soul. She loved children passionately. She never saw a single child without being moved to tenderness. She was interested in the innocence and weakness of this age. She loved to observe nature in them; nature which, thanks to our moral habits, is now seen only in childhood. She took pleasure in chatting with them and in asking them questions; and she would not permit their nurses to prompt them. "I much prefer," she would say to them, "to hear the foolish things this child might say to me than those you might tell him to say. . . . I would like," she would add, "all those hapless souls about to be put to death for their crimes to be asked: 'did you love children?' I am sure they would reply that they didn't."
>
> By that you can see that she considered fatherhood as the sweetest natural pleasure. But the more sacred this pleasure was for her, the more she wanted it to be pure and free of difficulty. That is why she begged those of her friends who had little money not to marry. "What will become of your poor children," she would say to them, "if they lose you too soon? Think about how horrible your last moments will be as you leave behind and in misery those who were dearest to you!" Some of those to whom she spoke in this way married despite her objections. They brought their little children to her. She cried, kissed them, and became their mother.

See d'Alembert, *Lettre à M. de Condorcet*, 244–245.

5. In the *Confessions*, Rousseau acknowledged that he had placed his five children in the foundling home. The decision was not easy for him to make, and he returned to this problem on three different occasions. Each time he elaborated a little more on the considerations that led him to make the decision.

In Book VII, he explained that it was a normal practice in Paris at that time to put children in the foundling home *Collected Writings*, Vol. 5, 288–289). In Book VIII, after a long and involved argument, he associated this action with the duty of a good citizen. However, he admitted that there was a fallacy in that reasoning and finally excused himself by the afterthought that his children would have been taught to hate him (*Collected Writings*, Vol. 5, 299–300). In Book IX, Rousseau explained that he did not want to let his children be raised by Thérèse's family (*Collected Writings*, Vol. 5, 348–349).

6. Nothing is known about M. du Soussoi or his children.

7. Reading *tracasseries* with the manuscript.

8. According to Islamic tradition, Zayd was a slave of the prophet Muhammad who became so devoted to his master that he refused to accept his freedom when his father came to ransom him and take him home. Muhammad subsequently freed Zayd and adopted him as a son.

Voltaire drastically altered this traditional account in his play *Le Fanatisme, ou Mahomet le Prophète*. Whereas the traditional account suggests that Muhammad was guilty at the most of alienating Zayd's affection and of bringing him to forsake his filial obligations, Voltaire's Muhammad is an utter scoundrel who tricks Zayd into committing parricide and then kills him.

9. The passage that begins here and ends with the opening words of the next paragraph "from them. And . . ." is not in the manuscript. However, it does occur in the first edition of the *Reveries* in 1782, and most editors agree that the passage was written on a loose piece of paper which has been lost.

10. Reading *oracle* with the manuscript.

11. Reading *les situations* with the manuscript.

12. Contrary to all rules of grammar, the word "one" is missing from the manuscript.

13. The area around the Rue du Faubourg-Poissonière between the Rue des Messagéries and the Rue La Fayette was known as Nouvelle-France because the barracks there originally housed soldiers sent off to the wars in Canada. There was also a well-known tavern called the Nouvelle-France located on the Rue du Faubourg-Poissonière near where Rue Montholon now intersects it.

Rousseau probably walked up the Rue Poissonière and continued on up the Rue du Faubourg-Poissonière keeping Montmartre on his left until he reached the little village of Clignancourt. He would then have come around behind Montmartre and back into the city.

14. Nanterre was famous for its salty rolls and little cakes.

15. Reading after "heart" *et qu'une réaction douloureuse finit toujours en les repoussant* with the manuscript.

16. The French word is *écu*. It was the smallest gold coin in use at that time and was normally worth three livres or francs.

17. The face of the waferman's board was divided into numbered sections and had a large arrow that could be spun. He would beat his drum to attract a crowd and then let each child spin the arrow. The child then received as many of the sweet little cylinder- or cone-shaped wafers as the result of the spin determined.

18. The Château de la Chevrette was near Montmorency and belonged to Mme d'Epinay. It was not far from the Hermitage. Mme d'Epinay's husband was Denis-Joseph Lalive, lord of Epinay; his name day, that is, the day of Saint-Denis, after whom he was named, is October 9. For another account of this celebration, see *Confessions*, Book IX, *Collected Writings*, Vol. 5, 390.

19. Reading *éventaire* with the manuscript

20. See n. 19.

21. The Hesperides were the three daughters of Night: Aegle, Erythea, and Hesperethusa. The island on which they lived near Mount Atlas was a marvelous garden filled with trees bearing golden apples and was guarded by Ladon, a dragon with one hundred heads. Heracles killed the dragon and gathered the apples as one

of his tasks. Rousseau alludes to the same story in Book I of the *Confessions* where he casts himself as a comic version of Heracles (*Collected Writings*, Vol. 5, 28–29).

22. The Hôtel des Invalides was built in 1670 as a home for wounded veterans.

23. See Plutarch, *Lives of Illustrious Men*: *Lycurgus*, 21.2. See also Plato, *Laws*, 664b–d.

24. According to the manuscript, this is a new paragraph.

25. The Ile aux Cygnes was an island in the middle of the Seine that stretched from the Champ de Mars to the Esplanade des Invalides. It was joined to the left bank in the beginning of the nineteenth century.

TENTH WALK

1. This Walk would thus have been written on April 12, 1778. In Book II of the *Confessions*, *Collected Writings*, Vol. 5, 40–41, Rousseau said that he met Mme de Warens (see Third Walk, n. 5) upon his arrival in Annecy on Palm Sunday 1728.

2. In Book II of the *Confessions*, *Collected Writings*, Vol. 5, 42, Rousseau identified the age of Mme de Warens in the same way: "She had been there for six years when I came and she was then twenty-eight, having been born with the century." As a matter of fact, Mme de Warens was born in 1699.

3. Since Rousseau was born on June 28, 1712, and since Palm Sunday fell on March 28 in 1728, he would not even have been sixteen years old at that time.

4. Following the advice of the Bishop of Annecy, Mme de Warens persuaded Rousseau to go to Turin and be converted to the Roman Catholic faith. According to his account in the *Confessions*, Book II, *Collected Writings*, Vol. 5, 46, he left Annecy on the Wednesday before Easter, that is, four days after his arrival. See also Third Walk, n. 4.

5. After his service in the de Vercellis household ended (see Fourth Walk, n. 4), Rousseau was brought into the household of the Comte de Gouvon and worked under the tutelage of his son. The comte and his son thought Rousseau had great promise and seemed desirous of training him for an eventual political career so that he could be of greater service to them, but Rousseau gave up this promising future to go off with a friend on an extravagant trip across the Alps and back to Annecy. In all, he spent a little more than a year in Turin. See *Confessions*, Book III, *Collected Writings*, Vol. 5, 77–86.

6. The context suggests that Rousseau is referring to the period of time spent in Les Charmettes from 1735 or 1736 until 1740 when he went to Lyon to tutor the sons of M. de Mably. See below his reference to a "period of four or five years" and *Confessions*, Books V and VI, *Collected Writings*, Vol. 5, 182–223. At the very beginning of Book VI of the *Confessions*, in speaking of the period of time spent at Les Charmettes, Rousseau even asserted: "Here begins the short happiness of my life; here come the peaceful, but quickly passing moments which have given me the right to say that I have lived."

However, using a quotation similar to this in his third letter to M. de Malesherbes, Rousseau identified the period of his happiness as covering the years from the day he moved into the Hermitage in 1756 until the date of the letter, that is, January 26, 1762 (*Collected Writings*, Vol. 5, 577).

The praetorian prefect was Similis. He had been a centurion during the reign of

Trajan and became a praetorian prefect under Hadrian. Dio is the source of the quotation about life and living; see Cassius Dio, *Cocceianus Roman History*, lxix.22.2. In his comment about Similis being disgraced under Vespasian, Rousseau seems to have been thinking of Martius Turbo. Although Similis was never disgraced, Turbo was. While serving under Hadrian, Turbo had said of himself that a praetorian prefect should die on his feet and was therefore accused of imitating what Vespasian had said about an emperor dying.

BOTANICAL WRITINGS

1. This text first appears in Moultou and Du Peyrou's posthumous 1782 edition of Rousseau's works. As the manuscript of the dictionary itself is no longer extant, it is not possible to determine whether Rousseau actually thought of this document as the introduction to his *Dictionary of Terms of Usage in Botany* or whether his literary executors arrived at this idea on their own. One scholar describes it as "the longest of the botanical fragments of Neuchâtel, that has been provided, rightly or wrongly, as an introduction to [Rousseau's] Dictionary of Botany, and which he wrote several years later." See Henry Cheyron, "Ray et Sauvages annotés par Jean-Jacques Rousseau," *Littératures*, Vol. 15 (Autumn 1986): 86.

2. In his references to the "laboratory," we can reasonably infer that Rousseau is referring to the chemical research of Academicians such as Guillaume Homberg, Simon Boulduc, Nicolas, and Louis Lémery (father and son) and the brothers Etienne-François and Claude-Joseph Geoffroy. Their laboratory procedures centered on distilling plants with fire and analyzing their salts and oils. These chemists were primarily interested in such medically useful plant products as cinchona (quinine) and jalapena (as a purgative). This chemistry predates the breakthroughs of Lavoisier and Priestley, which superseded the theories of phlogiston, ether, and the four primary elements, earth, air, fire, and water that had dominated natural science since Antiquity. Rousseau reveals his familiarity with the latter research in his unpublished manuscripts on chemistry, "Catalogue de tous les Mémoires de chymie contenus dans tous les volumes de l'Histoire de l'Académie R. des Sciences," 1699–1736 (Neuchâtel MS.), and his "Institutions chimiques," especially part II, Book IV, chapter 1, "De la distillation." See Théophile Dufour, *Les Institutions chimiques de Jean-Jacques Rousseau* (Geneva: Imprimerie du Journal de Genève, 1905).

3. These "Doctors" are medical herbalists. Myrepsus (14th century), an Alexandrian physician, acquired a vast pharmacopia "of all the compound medications which are reported in the writings of the Greeks and Arabs." See *La Botanique de J. J. Rousseau*, ed. A. Deville (Paris, 1823), 334. The "Hildegardes" were medieval herbalists, the most prominent of whom was Hildegarde of Bingen (1098–1179), the German abbess and mystic, whose knowledge of medicinal herbs is contained in *Physica* (Strasbourg, 1533). Suardus was the author of *Antidotarium* (Venice, 1551). Arnald of Villanova or Villa Nova (1240–1311), a medical professor at Montpellier, wrote numerous medical works, some of which, such as *De virtutibus plantarum* (Venice, 1509), discussed the medicinal virtues of plants. See Michael McVaugh, "The Experimenta of Arnald of Villanova," *Journal of Medieval and Renaissance Studies*, 1 (1971): 107–108. The Latin *Herbarius* is falsely attributed to Villanova; see Arber, 21.

4. Galen (129-?199), a Greek physician, attended the Roman emperor Marcus Aurelius and his son Commodus. He produced some valuable anatomical studies based on dissection and propagated the four-humors theory that dominated medicine until well into the early modern period. He did not leave any explicitly botanical or pharmaceutical works, but extolled the pharmaceutical work of Dioscorides, discussed below. Galen's works were frequently reprinted and translated in the sixteenth century.

5. Gaius Plinius Secundus, or Pliny the Elder (23–79 C.E.), wrote an encyclopedic *Historia Naturalis*, which derived its botany largely from Theophrastus, although Pliny did report some independent observations from Germany and gave synonyms to Greek plant names.

Dioscorides (ca. 40–90 C.E.), a Greek physician probably in the service of the Roman army, acquired an extensive knowledge of medically useful plants in the course of his travels. In *De materia medica libri quinque*, he describes approximately 500 plants (e.g., cannabis, colchicum, hemlock, peppermint) and 1,000 simple drugs (e.g., arsenic, mercury, opium). His was the primary text of pharmacology in Europe until the end of the fifteenth century and continued to be reprinted and translated in the early modern period. His work is still useful for Mediterranean flora and the names he used are still employed there alongside Linnaean ones.

6. Rousseau's phrase, *ces doctes plantes*, seems to refer to those plants that herbalists and physicians had studied and included in their works.

7. Carolus Clusius, or Jules Charles de l'Ecluse (1526–1609), a Flemish botanist, studied at Montpellier and was director of the imperial Habsburg garden in Vienna (1573–1587). He traveled widely, producing florae of Spain, Portugal, and Austria, as well as the first treatise on fungi, part of his *Rariorum plantarum historia* (Antwerp, 1601). He introduced the tulip, potato, and chestnut into Europe and laid out the botanical garden at Leiden, where he ended his career as a professor.

The works of Valerius Cordus (1515–1544) were published posthumously. His *Dispensatorium* (Nuremberg, 1546) became the standard German pharmacopeia; see *Annotationes in Pedacii Dioscorides* and *Historia stirpium libri IV* and other works in one volume edited by Conrad Gessner (see below) (Strasbourg, 1561), and *Stirpium descriptiones liber quintus* (Strasbourg, 1563).

The work of Andrea Cesalpino (1519–1603), an Italian physiologist, botanist, and papal physician, was groundbreaking. He classified plants by their flowers and fruits in *De plantis libri XVI* (Florence, 1583). Linnaeus drew on Cesalpino's approach in constructing his own sexual system of classification, calling him "the first true Systematist" (*PB*, par. 54).

Conrad Gessner (1516–1565), a Swiss physician and naturalist, compiled systematic information on plants and animals, as well as works on bibliography and mountaineering. While he never completed his planned survey of plant life, he left extensive notes and about 1,500 woodcuts that formed an important source for subsequent botanical works.

8. The term translated here as "appearance" is *port*. Rousseau's use of this term suggests his awareness of the unfinished natural history of plants launched in the seventeenth century by the Académie royale des sciences. This ambitious effort, spearheaded by Samuel Cottereau Duclos (1598–1685), used *port* to indicate whether a plant was "tall (*eslevée*), or rested its branches on the earth without sending out

roots from them (*couchée*), or rested its branches on the earth and sent out roots from them (*rampante*), or leaned (*appuyée*)." Stroup, 73. See also Yves Laissus and Anne-Marie Monseigny, "Les Plantes du roi: Note sur un grand ouvrage de botanique préparé au XVIIe siècle par l'Académie royale des Sciences," *Revue d'histoire des sciences*, Vol. 22 (July–Setpember 1969): 193–220.

9. Joseph Pitton de Tournefort (1656–1708) was a French botanist and physician affiliated with the Jardin du Roi (1683–1708). He is best known for his classification of genera based on the structure of the flower and fruit; while his descriptions and use of Latin generic names laid the basis for later nomenclatural reforms by Linnaeus, he denied plant sexuality. He undertook plant collecting journeys to the Pyrenees, Asia Minor, and Greece (see his posthumous *Relation d'un voyage du Levant* (Paris, 1717). Tournefort's herbarium of 6,963 species is preserved at the Muséum d'Histoire Naturelle (Paris). His other main works are *Elémens de botanique* (Paris, 1694), transl. into Latin as *Institutiones rei herbariae* (Paris, 1700), and *Histoire des plantes qui naissent aux environs de Paris* (Paris, 1698).

10. Jean Bauhin (Joannes Bauhinus; 1541–1613) and Gaspard (Caspar) Bauhin (1560–1624) were the sons of a French Protestant convert who fled to Switzerland. Jean Bauhin assisted the Swiss botanist Conrad Gesner with his Alpine expeditions and produced *Histoire universelle des plantes* (Yverdon, 1619) and his posthumous *Historia plantarum universalis* (1650) in which 5,000 plants are described. Gaspard Bauhin studied at universities in France, Italy, Switzerland, and Germany prior to becoming a professor of medicine and botany at Basel. He collected plants on his travels, corresponded with the most prominent botanists and left an herbarium of 4,000 specimens. He wrote *Phytopinax* (Basel, 1596), *Prodromus theatri botanici* (Frankfurt am Main, 1620), and *Pinax theatri botanici* (Basel, 1623). Linnaeus relied heavily on the latter work, which discusses 6,000 species. Jean Bauhin clearly delineated for the first time the species and genus through the use of what he considered to be natural relations or affinities.

11. Rousseau's meaning is ambiguous: "the rest" might mean (1) the other works Gaspard Bauhin wrote, but never published or (2) the titles of all other botanical works, as "pinax" means "picture, *hence* a general survey *or* representation." See W. T. Stearn, *Botanical Latin*, 4th ed., s.v. "Pinax." The title "pinax" is neither italicized nor capitalized in the 1782 text.

12. Paul Hermann (1646–1695), a Dutch botanist of German birth, journeyed to Africa, India, and Ceylon. He was professor of botany at Leiden (1680–1695) and assembled important herbaria. His *Musaeum zeylanicum* (Leiden, 1717) served as the basis for Linnaeus's *Flora zeylanica*. His other works are *Horti academici lugduno-batavi catalogus* (Leiden, 1687), *Schola botanica* (Amsterdam, 1689), *Florae lugduno-bataviae-flores* (Leiden, 1690) and *Paradisus batavus* (Leiden, 1698).

Augustus Quirinus Rivinus (Bachmann; 1652–1723), a German physician and botanist, wrote *Introductio generalis in rem herbarium* (Leipzig, 1690), a series of works on plants with irregular flowers, *Ordo plantarum, quae sunt florae irregulari monopetalo . . . hexapetalo* (Leipzig, 1690–1699), as well as *Officinal-Kräuter* (Leipzig, 1717).

The self-taught naturalist and so-called "father" of English botany, John Ray (1627–1705), made lasting contributions to classification with his *Methodus plantarum Nova* (London, 1682; rev. ed. *Methodus plantarum emendata et aucta*, 1703),

his *Historia plantarum*, 3 vols. (London, 1686–1704), and his *Synopsis methodica stirpium britannicarum* (London, 1690), later amended by Dillenius (1724) and converted to the Linnaean system by Hill (1760). Ray insisted upon the taxonomic salience of the cotyledon and the species. In addition to his botanical opus, he produced substantial works on zoology and natural religion, with special emphasis on the argument from design.

13. Dens Leonis tooth [dandelion] *which* is a pilosella with a less shaggy hairy leaf: Doria *which* is Jacobaea orientalis with the leaf of a beet: Titanokeratophyton *which* is a whitish Litophyton marinum.

14. Leonard Plukenet (1642–1706), an English physician and botanist, was Queen's Botanist and Superintendant of the Hampton Court Garden. His works, especially *Phytographia* (in four parts, London, 1691–1696), were a major source for Linnaeus, "who described numerous plants according to the information provided by this author, and in particular according to the illustrations which he had published." M. Guédès, "Les œuvres de Leonard Plukenet et leurs réimpressions," *Archives of Natural History*, (1981) Vol. 10, no. 1: 67–76. Plukenet's other publications were *Almagestum Botanicum* (London, 1696), *Almagesti Botanici Mantissa* (London, 1700), and *Amaltheum Botanicum* (London, 1705).

15. "A cockroach-bearing Carolinian grass, or a very tall grass with a large showy panicle composed of rather large, rather compressed spikes, pinnate on both sides in a manner recalling, the grinding cockroach, with convolute mucronate pungent leaves rolled up in one another, terminating in a hard, sharp point." Rousseau's source is Plukenet's *Almagestum Botanicum* (London, 1696), 173. Rousseau has transposed the page number and reproduced the original Latin somewhat inaccurately. For assistance in translating this and the preceding Latin passage, I would like to thank Dr. Elizabeth Edgar of Landcare Research New Zealand Limited, Lincoln, New Zealand.

16. These three parts of natural history are traditionally animals, plants, and minerals and are studied in zoology, botany, and geology and/or mineralogy, respectively.

17. Linnaeus wanted to be known for his "reform" of botany; to this end he emphasized his importance in *Reformatio botanices* (Uppsala, 1762), a dissertation that, as was customary, he wrote, but that was published under the name of his student, Joannes Martinus Restelius. Sten Lindroth terms this self-congratulatory work "through and through a monument to Linnaeus himself." See "The Two Faces of Linnaeus," in *Linnaeus: The Man and His Work*, ed. Tore Frängsmyr (Berkeley: University of California Press, 1983), 57.

18. "Circuit of words" here refers to a "circuit of words, long discourse before arriving at the point." Littré, s.v. "circuit."

19. *Géomètre* has several meanings: a narrow meaning is "surveyor," while the broader meaning is "One who is versed in mathematics. Newton was a great geometer." Littré, s.v. "Géomètre."

20. "Trivial" refers to the *nomen triviale*, the epithet Linnaeus added to the generic name; the two together form the binomial, "but the trivial name is not Linnaeus's real species name, which is in fact a polynomial phrase." Rousseau's understanding of this concept is therefore not strictly correct: "the definition was the name, only later was it the binomial." Personal communication, Peter F. Stevens,

Missouri Botanical Garden. See also John Lewis Heller, "On Linnaean 'Trivial Names,'" in *Studies in Linnaean Method and Nomenclature* (New York: Peter Lang, 1983), 277–305, and W. T. Stearn, "The Preparation of the *Species plantarum* and the Introduction of Binomial Nomenclature," in Carolus Linnaeus, *Species plantarum*, facsimile ed. (London: The Ray Society, 1957), 70–71.

21. Pier (Pietro) Antonio Micheli (1679–1737) was curator of the botanical garden of Florence, botanist to the Grand Duke of Tuscany, and a pioneer in the study of cryptogams (plants lacking true flowers). He authored *Relazione dell'erba detta da'botanici Orobanche* (Florence, 1723), *Nova plantarum genera juxta Tourneforti methodum disposita* (Florence, 1729), and *Catalogus plantarum horti caesarei florentini opus posthumum* (Florence, 1748).

22. Rousseau refers to Antoine-Laurent de Jussieu (1748–1836), demonstrator of plants at the Jardin du Roi, whose *Exposition d'un nouvel ordre des plantes adopté dans les demonstrations du Jardin Royal* (Paris, 1774) and *Genera Plantarum, secundum ordines naturales disposita juxta methodum in horto regio Parisiensi exaratam, anno 1774* (Paris, 1789) presented the system of plant classification in families developed by his uncle, Bernard de Jussieu (1699–1777). Antoine-Laurent indeed substituted Linnaean nomenclature for that of Tournefort in his reorganization of the Jardin du Roi in 1773, citing as his reasons that Linnaean names are "more abridged, more convenient, and generally adoped throughout Europe: which places the garden in Paris in this regard in harmony with the other foreign botanic gardens," but preserved "in their integrity the majority of the families established, fourteen years earlier, by his uncle in the garden of [the] Trianon." See de Jussieu, 11–12. Bernard de Jussieu studied medicine at Montpellier, was subdemonstrator of the exterior of plants, demonstrator, and director at the Jardin du Roi. In 1759 King Louis XV wanted to establish a school of botany at Versailles and called Bernard de Jussieu to organize a botanical garden at the Petit Trianon at Versailles, which he arranged in accordance with his natural system. He also established that corals are animals, not plants, as some (including Linnaeus) had believed. Rousseau attended Antoine-Laurent de Jussieu's courses for five years in the 1770s in Paris, and his botanical thought shows the influence of the Jussieus. For an extensive treatment of Antoine-Laurent Jussieu's contribution, see Stevens.

23. Heinrich Johann Nepomuk, Freiherr (Baron) von Crantz (1722–1799), a Luxemburg-born botanist and physician, spent his professional life in Austria. Rousseau's letter of October 6, 1769, to Antoine Gouan attests to his having direct knowledge of Crantz's *Classis umbelliferarum emendata* (Leipzig, 1767). Crantz's other major works were *Classis cruciformium emendata* (Leipzig, 1769), *Institutiones rei herbariae*, 2 vols. (Vienna, 1766), and *Stirpium austriacarum fasciculus*, 3 vols. (Vienna and Leipzig, 1762–1767).

24. The works in question are Albrecht von Haller's *Historia stirpium indigenarum Helvetiae inchoata* (Bern, 1768) and Michel Adanson's *Familles des plantes*, 2 vols. (Paris, 1763–1764). Haller (1707–1777) was a physician, scientist, and man of letters of international repute, well-known for his critical view of Linnaean systematics. A native of Bern, Haller taught for many years at Göttingen and had an illustrious career in science and letters.

Adanson (1727–1806), an explorer and systematic botanist, had a difficult career as a brilliant nonconformist on the fringe of the French scientific establishment de-

spite his membership in the Académie Royale des Sciences (Paris). His research on the natural history of Senegal confirmed his opinion of the Linnaean system as inadequate. Instead of privileging the reproductive or any other plant parts in an a priori way as the basis for classification, Adanson prescribed a "holotaxonomic" method that takes all characters into account. Linnaeus found Adanson's natural method "silly," but Antoine-Laurent de Jussieu adopted Adanson's principles over those of Linnaeus. Some scholars see Adanson as "undoubtedly a better scientist than Linnaeus and his philosophy and methodology were much more in tune with modern thinking than those of Linnaeus." See V. H. Heywood, "Linnaeus—The Conflict between Science and Scholasticism," in *Contemporary Perspectives on Linnaeus*, ed. J. Weinstock (Lanham, Md.: University Press of America, 1985), 9. See also the essays collected in G. H. M. Lawrence, ed., *Adanson: The Bicentennial of Michel Adanson's Famille des plantes*, 2 vols. (Pittsburgh: Hunt Botanical Library, 1964).

25. Hendrik Adriaan van Rheede (Reede) tot Draakenstein (Drakenstein; 1636–1691), an important officer of the Dutch East India Company ("VOC"), composed a team of physicians, translators, painters, and plant experts to provide a polyglot guide to the plants of India in his *Hortus indicus malabaricus*, 12 vols. (Amsterdam, 1678–1693). He included Latin, Portuguese, Dutch, Arabic, Malay, and Malabarese plant names, the presumed medical "virtues" of the plants, and a rich collection of illustrations depicting them, thereby laying the basis for the West's botanical knowledge of this region. See M. Fournier, "Enterprise in Botany: Van Reede and His *Hortus Malabaricus*—Part I," *Archives of Natural History* Vol. 14, no. 2 (1987): 123–158. Rheede is misidentified in Deville's edition (1823) as "François Rédi," a seventeenth-century Italian botanist; Martyn refers to him briefly in his "Translator's Preface," p. x, but not at this point in the text, while other editions ignore Rousseau's reference to Rheede.

Georg Eberhard Rumphius (Rumpf; 1628–1702), a German botanist and physician, traveled widely in the Dutch East Indies in the employ of the Dutch East India Company. His *Herbarium amboinense*, ed. J. Burman, 6 vols. (Amsterdam, 1741–1750), a landmark work on the flora of Ambon (an island part of present-day Indonesia), was "considered one of the most remarkable books of its time." It described 1,700 plants, 1,060 of which were illustrated; this accomplishment earned Rumphius the title, "the Indian Pliny." See Alice M. Coats, *The Quest for Plants: A History of the Horticultural Explorers* (London: Studio Vista, 1969), 201. (Note that Rumphius's years are not 1626–1693, as stated in Leigh, Vol. XL, 78, n. [b].) The Duchess of Portland made a gift of the *Herbarium amboinense* to Rousseau in 1776, but according to Rousseau's letter of 11 July 1776 to the Duchess, he sent it back.

26. "The curious" is attested in a botanical context in English in James Edward Smith, *An Introduction to Physiological and Systematical Botany* (Philadelphia: Anthony Finley/Boston: Bradford & Read, 1814), 15.

27. See "Pédicule" and "Pétiole," pp. 120–123 above.

28. Rousseau or his editors may have made an error here; the sentence would read correctly if the preposition were *sur* (above) rather than *sous* (under).

29. The word translated here as "seed," is *semence*; see "Semence." *Graine* is likewise translated as "seed." Rousseau, like Jussieu, Linnaeus, and Ray, "described all plants whose fruits had a single seed and in which the pericarp was closely joined

to the testa as having naked seeds" (Stevens, 506, n. 57). In Jussieu's words, the seed is "the essential part par excellence, the basis for the fundamental divisions of the natural order," into acotyledonous, monocotyledonous, and dicotyledonous plants (Stevens, 299). The seed contains the embryo, which Rousseau also calls the "ovary," "germ," and "fruit." See "Fleuron."

30. Rousseau appears to be thinking of a winged petiole like that found on citrus plants.

31. Rousseau uses *fécondation* and *féconder*, not *fertilisation* or *fertiliser*. The term *fertiliser* is attested in the first edition of the *Dictionnaire de l'Académie française* of 1694, but *fertilisation* may not have been available to Rousseau, as it is not yet attested at the end of the century in the fifth edition of the same work (1798).

32. While Rousseau here uses *poussière prolifique*, he employs the term *pollen* in the first letter on botany to Mme Delessert, p. 132 below. *Pollen* (in both French and English) went under a variety of names at this time, including *poussière fécondante*. Lamarck refers to *poussière fécondante* (pollen) in *Flore françoise*, 3 vols. (Paris, 1778), vol. I, 108. See also "Poussière Prolifique."

33. Guilio Pontedera (1688–1757), Italian physician and botanist, directed the botanical garden of Padua from 1719 until his death. The work to which this entry refers is *Anthologia, sive, De floris naturae* (Padua, 1720).

Sébastian Vaillant (1669–1722), a physician and botanist, student of Tournefort and secretary to Guy-Crescent Fagon, director of the Jardin du Roi, became curator of living collections and sous-démonstrateur in 1708 at the Jardin du Roi. Vaillant was a "sexualist," who emphasized the sexual character of plants in contrast with Pontedera, an "asexualist" who denied plants' sexual character. On 10 June 1717 Vaillant gave his inaugural lecture at the Jardin in which he presented the stamens as the male reproductive organs of the flower, later published in a bilingual Latin and French edition as *Discours sur la structure des fleurs/Sermo de structura florum* (Leiden, 1718); this work was pivotal for Linnaeus' sexual system of classification, and it is probably the one Rousseau has in mind here. Linnaeus says Vaillant began the reform of botany (*PB*, 208) and that Vaillant's *Sermo* revealed the mystery of sex in plants (*PB*, 22). Vaillant also wrote *Botanicon parisiense* (Leiden, 1723 [Latin]; 1727 [French]), *Eclaircissement de nouveaux caratères de plantes* (Paris, 1721), *Etablissement de nouveaux caracters de trois familles ou classes de plantes à fleurs composées* (Paris, 1718–1722), and *Remarques sur la méthode de Tournefort* (Paris, 1722). See Vaillant, 195–228, and Stafleu, 35, 119.

34. In this definition Rousseau, following Adanson, distinguishes the *Aphrodites* from the *Hermaphrodites*. We have translated *Aphrodite* as "Anaphrodite."

35. See n. 24.

36. This is probably an allusion to Buffon's famous statement in volume eleven of his *Histoire Naturelle* (1764) that "in nature there only exist individuals." Quoted in Phillip R. Sloan, "From Logical Universals to Historical Universals," in *Histoire du concept d'espèce dans les sciences de la vie* (Paris: Fondation Singer-Polignac, 1987), 124. Buffon's statement, made in the course of an attack on Linnaean taxonomy, must be taken in conjunction with other statements (e.g., "The species are the sole beings of Nature" [Sloan, 125]). Rousseau relied heavily on Buffon in Part I of his *Discourse on the Origins of Inequality*. *Collected Writings*, 3, 70–71, 73. Buffon was intendant of the Cabinet du roi, Paris, the royal natural history collections. He

transformed the Cabinet from a modest enterprise into a great one, making its collections, including in particular those of the Jardin du Roi, among the greatest in the world. His great work of natural history was his *Histoire Naturelle*, in thirty-six volumes. See Jacques Roger, *Buffon*, trans. S. L. Bonnefoi (Ithaca: Cornell University Press, 1997).

37. In this definition Rousseau describes what is now known as asexual reproduction; he uses "asexual" to refer to sterile flowers.

38. Rousseau refers to the work on mosses of Johann Jakob Dillenius (Oxford, 1741) by an anachronistic French title, rather than by its proper Latin title, *Historia muscorum*. Dillenius (1687–1747), a German botanist who settled in England and became Sherardian professor of botany at Oxford, anonymously revised the third edition of Ray's *Synopsis* (London, 1724) and wrote important works in his own name, including *Catalogus plantarum circa Gissam* (London, 1718), which described 200 mosses and 100 fungi, and *Hortus elthamensis*, 2 vols. (London, 1732). When Linnaeus visited England in 1735, he made a point of meeting Dillenius.

39. The caprifig (*Ficus carica*) is also known as the wild fig; it is native to southern Europe and Asia Minor.

40. That is to say, the stem tissue surrounding the minute male flowers that make up the bulk of the fig "fruit."

41. Theophrastus of Eresos (370?-285 B.C.E.) Aristotle's successor as head of the Lyceum, is reputed to have written on a wide range of topics, of which only his works on ethics, metaphysics, and botany have survived; his discussion of caprification occurs in *The Enquiry into Plants*, trans. A. F. Hort (Cambridge: Harvard University Press, 1916), 151–155.

42. Rousseau's phrase, *sur les lieux mêmes*, is not entirely clear.

43. These botanists are all referred to in the Introduction, with the exception of Pontedera, whose *Anthologia* Rousseau discusses above in "Anthologie."

44. The French word for "capsule" is *urne*. See "Urne."

45. The *Arundo calamagrostis* of Linnaeus is now known as *Calamagrostis lanceolata*.

46. This term is no longer applied to the ferns and is generally confined to the animal realm.

47. Personal communication, Peter May, Institute of Oenology and Viticulture, Adelaide, Australia.

48. See n. 22 on the Jussieus and their natural method, in which the distinctions Rousseau makes here play an important role.

49. Hepatica is an old herbalists' name for Common Liverwort, now *Marchantia polymorpha*, which, according to the *OED*, is "a lichen-like plant which creeps over wet rocks and damp ground."

50. Other names for the Guelder Rose include Queen's Pincushion, Snowball Tree, May-rose, Crampbark, Cranberry-tree, and Water-elder.

51. See the sixth letter to Mme Delessert, in which Rousseau clarifies further what he means by this term, p. 152 below.

52. Rousseau refers to the twenty-second class of the Linnaean system of sexual classification: "Male flowers and female flowers are on different plants." See Stearn, 32. The editors of the Pléiade edition refer to current taxonomy when they point out that plants having dioecious flowers do not in fact constitute a "class" or "im-

portant division" of the plant realm, but rather, are found in the most diverse families of plants. Pléiade, IV, 1838.

53. In this category the male and female flowers appear on entirely different plants, not merely on different stalks of the same plants.

54. This is likely to be a nectary.

55. Rousseau refers to bracts of various kinds.

56. Rousseau refers to bulb scales.

57. The genus name has changed from *Aira* to *Molinia*.

58. The editors of the Pléiade edition note that the ear is a type of inflorescence rather than a *bouquet*. Pléiade IV, 1839.

59. Technically, this is a raceme.

60. This entry is found out of alphabetical order in the 1782 edition.

61. Note that in addition to transpiration of moisture, leaves perform photosynthesis and gas exchange. Given the state of plant physiology when Rousseau was composing this work, he could not have known of these other functions; the research of Ingen-Housz, Priestley, and Lavoisier still lay in the future. See also *PB*, 81.

62. Rousseau refers to Joachim Jungius (Jung; 1587–1657), a Hamburg professor of natural history, who wrote two brief, but significant, works, *Doxoscopiae physicae minores* (1662) and *Isagoge phytoscopica* (Hamburg, 1679). The latter work investigates the morphology of higher plants. Jung developed an analysis of the geometrical relations among plant parts and enlarged Cesalpino's attempt to develop a natural system of classification based on reproduction. His analysis of the flower and his contribution to the development of a technical vocabulary of plant description are particularly noteworthy. See Morton, 167–175. Jung and Cesalpino "were to provide both Ray and Linnaeus with their basic theory" (A. C. Crombie, *Styles in Scientific Thinking*, Vol. II [London: Duckworth, 1994], 1267).

Christian Gottlieb Ludwig (1709–1773), a German follower of the botanist Rivinus (see Introduction) and extraordinary professor at Leipzig, incorporated Linnaean reforms into his work. His thesis, *De sexu plantarum* (Leipzig, 1739) had obvious affinities with the views of Linnaeus, as did his *Observatione in methodum Linnaei* (Leipzig, 1739), which Du Peyrou purchased for Rousseau in 1767 (Jansen, 116). There was no French edition of the *Philosophia botanica* at this time, so Rousseau's use of a French title, *Philosophie botanique*, is, like his earlier reference to Dillenius's *Histoire des mousses*, anachronistic. A French translation of *Philosophia botanica* by A. Quesné appeared in 1788 (published in Paris and Rouen). See *PB*, 87, where Linnaeus provides in summary paragraph form the definitions to which Rousseau refers here.

63. We have translated *bleds* as referring to wheat. *Bled* is an old spelling of *blé*, or wheat. A more recent meaning of *bled* is wasteland or desert, but this is an Algerian loan word introduced into military jargon in the nineteenth century. See *Trésor de langue française: Dictionnaire de la langue du XIXe et du XXe siècle (1789–1960)*.

64. Rousseau's phrase, "*le jeu de la machine organique*," is translated literally.

65. Germ (*germe*) had largely passed out of contemporary botanical parlance by the time Roussseau writes; it was replaced around 1746 by the term *ovaire* ("ovary"), which had come into botanical vocabulary from medical or anatomical

language. See Haudricourt, 18, n. 1. In "Germe" Rousseau acknowledges the close, even virtually synonymous, meanings of *germ* and *ovary*.

66. See p. 110 above.

67. Rousseau's term *institutions*, translated as "principles," is often found in the Latin titles of botanical texts, as in *Institutiones rei herbariae* by Tournefort. Rousseau means, therefore, principles of the science of botany.

68. There is no entry for "corolla."

69. Rousseau uses *graine*, meaning "the seed of herbs and some trees." 1694 *Dictionnaire de l'Académie*.

70. See also *PB*, 86–87, where Linnaeus defines "Fructificatio" as both the parts and the process of reproduction.

71. In the French editions, starting with that of 1782, there are two entries for "Fruit," the second one appearing in a smaller typeface than the first.

72. See n. 65.

73. This is close to Linnaeus' definition of "raceme." See *PB*, 82.

74. The currant bush has a raceme; the vine has a cyme. Linnaeus describes both as having a raceme.

75. Grafting is a very old horticultural art; in his *Monographie des Greffes* (Paris, 1821), André Thouin "describes 119 kinds of grafting." Bailey, 1363. See Rousseau's letter to Thouin, an important figure at the Jardin du Roi and its successor, the Jardin des plantes.

76. Rousseau uses the term *greffe* or "graft," which "is sometimes used in the sense of *cion*, but it would be better used for the completed thing—the new plant or part made by the joining of cion and stock." Bailey, 1362.

77. This graft is known in French as *greffe en flûte*, *fluteau*, or *sifflet*. This graft involves removing a twig from the stock, cutting off its top and removing the bark from the top of the remaining twig. The scion, a tube of bark and buds, is then slipped over the peeled part of the stock, and the joint is covered with wax. See Henri Louis Duhamel du Monceau, *Traité des arbres fruitiers*, Vol. I (Paris, 1785), 65.

78. Rousseau suggests that the liber detaches itself from the cortex and the epidermis; it in fact develops from cells immediately outside the wood.

79. These are, in other words, cotyledons.

80. *OED* defines a "mallet shoot" as "a hammer-shaped slip of a tree or shrub for planting."

81. Rousseau's term *pediculées* can refer either to "pedicellate" or "petiolate." See "Pédicule" and "Pétiole."

82. See "Germe."

83. *Graine*, translated here literally as "grain," is synonymous with *semence*, translated here as "seed." Where *graine* or "seed" appear alone, both are translated as "seed."

84. See "Etendart."

85. Elsewhere in these definitions, Rousseau uses the term much more loosely, and it is often translated as "stalk."

86. Although Rousseau means to say "having petals," the word he uses means "like a petal."

87. For the view that the style functions analogously to the fallopian tube, see Vaillant, 204.

88. See *Végétal*.

89. This definition presents the following difficulties: (1) translation of *végétal* into English is awkward since "plant" is normally the best translation, but will not suffice here, and (2) *herbe* in French normally has the sense of "grass," while Rousseau's usage relies on an older meaning deriving from antiquity. The term "herba" appears frequently in Pliny, but far less frequently in the work of Tournefort, who often substitutes *plante* for *herbe*. Rousseau uses the older term to define the newer one. On the decline in the use of "herbe" in the eighteenth century, see Anne-Marie Prévost, "Sémantique de 'herbe,' et 'plante': Pierre Belon (1555) et Tournefort (1708)," *Comptes rendus de l'Académie des Sciences Paris* 258, group 11 (8 June 1964), 5697–5700. According to Linnaeus, "the Herba is the part of the plant arising from the root, terminated by the fructification, and it consists of the *trunk*, the *leaves*, the *fulcra* [various supporting parts or subsidiary organs, e.g., bracts, stipules, petioles], and the *hybernaculum* [buds, bulbs, etc.]" (*PB*, aph. 81). For Linnaeus the "Herba" includes only the vegetative parts of the plant and is completely distinct from the reproductive organs, as he makes clear in his three-part definition of the plant: the root, the herb, and the fructification. By contrast, Rousseau's plant has two principal parts: root and herb. The fructification is therefore not a distinct part, but may by implication be assimilated to the herb. Rousseau's definition includes the cryptogams, those plants whose reproductive apparatus was still obscure and that formed the twenty-fourth class of Linnaeus's sexual system of classification. (It is, however, not absolutely certain that Linnaeus's definition excludes the cryptogams.)

90. Under the current five-kingdom scheme of classification, truffles now belong to their own distinct phylum or kingdom, namely, the Fungi, distinct from the Plantae.

91. We have adopted this convention to distinguish between Rousseau's use of *plantes*, translated as "plants," and his use of *végétaux*, a broader term without a ready English equivalent. We can expect Rousseau to conform at least generally to the distinction Linnaeus makes between "Vegetabilia," consisting of seven families, and "Plantas," which is only one of these families. Other families are Fungi, Algae, Mosses, Ferns, Grasses, and Palms. See *PB*, 78. We translate *végétaux*, therefore, as "plants [végétaux]."

92. Rousseau here describes what is now known as "vegetative propagation." Du Peyrou and Moultou remark that "This article does not appear to have been completed any more than many others, although we have assembled, in the three paragraphs above which compose this one, three bits from the Author all on as many scraps." 412, n. (c).

93. Rousseau refers to Jean-Etienne Guettard's *Observations sur les plantes*, 2 vols. (Paris, 1747), which focuses on the plants of Etampes. See Leigh, vol. XXXVII, 155. Guettard (1715–1786), a medical doctor, botanist, and mineralogist, became a member of the Royal Academy of Sciences (Paris) in 1743 and was a disciple of Réaumur and Bernard de Jussieu. Linnaeus mentions Guettard favorably as a recent botanist who has followed proper procedures in assigning specific plant names. See *PB*, 258.

94. "Polygamia" is the twenty-third class of the Linnaean sexual system.

95. However, neither bilberries nor apocynums have stipules.

96. Rousseau's term *côte*, translated here as "midrib," is defined in Littré as the "median and principal nerve in a large number of leaves." According to Pléiade, it is no longer in use. See Pléiade, IV, 1847.

97. The best translation is "sucker," even though the French word for this is "surgeon." However, the horizontally-running structures of Couch grass are in fact stems.

98. Marcello Malpighi (1628–1694), Italian physician and professor of medicine, founded the study of microscopic anatomy. In addition to investigating chick embryology and the capillary network in humans, he was the first to examine plant structure under a microscope. In his *Anatome plantarum Idea* (Bologna, 1671), he noted analogies between plants and animals, one of which Rousseau introduces here. In 1691, after arousing much controversy (his enemies destroyed his villa, microscopes, and papers in 1684), he was appointed physician to Pope Innocent XII and awarded other honors in recognition of his achievements. Malpighi's botanical work had close affinities with that of his English contemporary, Nehemiah Grew (1641–1712). See Morton, 178–194, and H. B. Adelmann, *Marcello Malpighi and the Evolution of Embryology*, 5 vols. (Ithaca: Cornell University Press, 1966).

99. See "Capuchon."

100. See "Plante."

101. "They" might refer to the materialist *philosophes* such as Diderot. Rousseau attacks radical materialism most notably in the "Profession of Faith of the Savoyard Vicar," in *Emile*.

102. The new "physic" may refer to Diderot's view that all matter is endowed with sensitivity (*sensibilité*). See, for example, Denis Diderot, *Rameau's Nephew/ The Dream of d'Alembert*, trans. L. W. Tancock (New York: Penguin, 1966), 149. It is arguable, however, whether Diderot thought stones were endowed with "sentiment"; rather, he argued that inert matter had the potential to become sentient matter through being consumed directly or indirectly by living creatures.

103. "Byssus," is a species of fungus, while "Conferva," misidentified in the Pléiade edition as "Conserva," is a species of algae. See Pléiade, IV, 1246. See "Plante," where Rousseau holds the Truffle is not a plant. For a similar view on analogy, see A-L de Jussieu, translated in Stevens, 275.

104. Rousseau's comment reflects his critical view of the contemporary interest in so-called "exotic" plants imported into and acclimatized in Europe. See the Introduction to this volume for a discussion of this development. Darwin likewise commented on the changes introduced by transplantation. See Darwin, 264.

105. Rousseau refers to his letter of 13 August 1771.

106. This paragraph is missing from the manuscript of the letters at the library of Neuchâtel, presumably because the addressee, Mme Delessert, did not wish any matters of a personal nature to be relayed in the published version. It was restored by Godet and Boy de la Tour. The originals are in the possession of one of Mme Delessert's descendants (see Pléiade, IV, 1886).

107. M. Josse is a character in Molière's *L'Amour médecin* "who counsels Sganarelle to purchase jewelry to cure his daughter, because he himself is a goldsmith (act I, scene 1)." Pléiade, IV, 1808.

108. Rousseau's term is "*l'âme*," which Martyn and Ottevanger both misleadingly translate as "mind" (*esprit*). Martyn, 19; Ottevanger, 26 (see n. 71).

109. Rousseau chooses as the first subject for study one of the largest and most important plant families, comprising more than 200 genera and about 2000 species.

110. The plant referred to here belongs to the genus *convolvulus* of the morning-glory family. The plant known in French as "clochette des champs" seems to be field bindweed (*C. arvensis*), also known in French as "liseron des champs."

111. See "Poussière prolifique." Martyn (23) introduces "farina" in this passage as a synonym for "pollen."

112. This is a reference to the classification criteria developed by Linnaeus. Martyn (24) omits a rendering of the phrase "*à divers degrés*."

113. Martyn (24) does not translate the phrase "des parties des fleurs."

114. Rousseau's "famille des liliacées" can be translated as "family of liliaceae" (the technical name for the lily family) or simply as "lily family." Martyn (24) translates "famille" as "tribe." By "tribe" he means an "order," a synonym for a "family." There is, however, nothing incorrect about Rousseau's use of the term "famille" to describe the "famille des Liliacées" and, according to modern authorities, the lilies form a family in the technical sense. Rousseau's "famille" is therefore translated literally as "family."

115. Martyn (24) omits the phrase, "mais toujours des bulbes," but Rousseau seems to have been trying to make an interesting, if slightly incorrect, point about the similarity of lilies in this respect; most, but not all lilies grow from bulbs, but bulbs are not roots. See Pléiade, IV, 1810, n. 2, in reference to p. 1154.

116. Martyn's translation (25) of the statement "ses parties qui les rend plus sensibles" by the abbreviated phrase "its other parts" avoids the difficulty in translating this sentence, but it is also an inadequate, even erroneous, translation. Rousseau emphasizes the pedagogical importance of using a flowering plant with easily visible parts, for many flowers are so small that their parts are visible only through a magnifying glass or microscope. Rousseau employed these instruments in his own investigations, but seems to have preferred to do without them in teaching a five-year-old. See Pléiade, IV, 1174–1175.

117. Per the wishes of Mme Delessert, this last sentence was not included in earlier published versions. It refers not to her daughter, the recipient of this course of instruction, but to her son, Jules-Jean-Jacques.

118. Sébastien Vaillant pointed out the diminished reproductive capacities of double flowers as "a typical degeneration." Vaillant is quoted in Carolus Linnaeus, *Systema naturae 1735*, trans. with introduction by M. S. J. Engel-Ledeboer and H. Engel (Amsterdam: Nieuwkoop & B. de Graaf, 1964), 11. See also *PB*, §150. In his *Discours sur la sexualité des fleurs* (1717), Vaillant writes:

> it happens fairly often that in some species of certain genera of polypetalous flowers, they dress as women in petals simply to create these agreeable monstrosities that we raise with so much care under the name of double flowers and among which we find but few or no testicles at all: these unnatural mothers devour them so to speak from the cradle in appropriating to themselves all their nourishment.

Quoted in French in Vaillant, 204; see Stevens, 299, for a similar view ex-

pressed by Antoine-Laurent de Jussieu. On sterile hybrids "accompanied by an excess of size or great brilliance," see also Darwin, 265.

119. "Character" or "caracter," a technical term of Linnaean systematics, refers to those characteristics of a plant or animal used to classify it. Linnaeus' system considered the number and position of stamens and pistils, but not color, as "characters" of a plant. Rousseau deplores the fact that color is not considered a systematic character. See letter of 12 February 1767 to the Duchess of Portland.

120. "Nasitord" is known also as "Field Peppergrass." "Natou" has no direct English equivalent. These plants belong to the species *Lepidium campestre*, which is a member of the same genus as the common cress, or "cresson alénois," *L. sativum*.

121. The herbarium did eventually reach its intended recipient, Mme Delessert's sister, "Aunt Julie," Julie-Emilie Willading-Boy de la Tour (1751–1826). It contains 101 plants and is housed in the Stadtsbibliothek of Zürich. See Théophile Dufour, "Petit Herbier pour Mademoiselle Julie Boy de la Tour," *Annales de la Société Jean-Jacques Rousseau*, Vol. 2 (1906): 260–268, and Ruth Schneebeli-Graf, *Das Zürcher Herbar von Jean-Jacques Rousseau*, guide to the exhibit of 12 January–13 March 1980, Wohnmuseum Bärengasse, Zürich.

122. Rousseau chooses six of the seven main families recognized in the natural system worked out by Bernard de Jussieu: Liliaceae, Cruciferae, Leguminosae, Labiateae, Compositae, Umbelliferae, and the grasses or Gramineae. See Stevens, 298.

123. See "Etendart" on p. 107 above. "Pavillon" is used only in French.

124. We have translated *quille* as "keel" and the virtually synonymous term, *nacelle* (or *carène*) as "carina." According to Peter Stevens, Rousseau "is making some sort of distinction between the keel as a whole, and the edge of the keel," personal communication.

125. Actually, two petals are involved.

126. The French word for butterfly is *papillon*.

127. Snapdragon goes under several names in French, *Gueule de loup*, *Muflier*, *Mufle de veau*, *Mufflande*, and *Mufleau*.

128. A reference to Mme Boy de la Tour's daughter, Julie, for whom Rousseau made the herbarium discussed in this and the preceding letters.

129. See Dufour and Schneebeli-Graf, n. 121.

130. See n. 9 on Tournefort.

131. Rousseau here echoes the pedagogical approach he previously outlined in *Emile*, Book III: "No book other than the world, no instruction other than the facts" (Bloom, 169). "In general never substitute the sign for the thing except when it is impossible for you to show [the thing]" (Bloom, 170). In short, Rousseau distrusted memorization of words as an effective means of learning. See also A.-L. de Jussieu, "Examination of the Family of the Ranunculi" (Mémoire read before the Académie royale des sciences in 1773), in which he pleads the case "for making Botany not a Science of memory and names, but a new Science, which has its combinations and affinities. . . ." (translated in Stevens, 275).

132. I have not been able to find this term attested in French.

133. Rousseau refers here to the various competing systems of plant classification of his day, among which the most prominent were those of Linnaeus and the Jussieus.

134. Chardon-roland or -roulant (*Eryngium campestre*) is a thistle-like plant,

for which the general English name is eryngo; alternative names are sea holly and snakeroot. Descriptions of a related species, *Eryngium alpinum*, appear in Rousseau's unpublished notes from Jean Bauhin's *Pinax* and Albrect von Haller's *Enumeratio methodica stirpium Helvetiae*, 1st ed. (Göttingen, 1742).

135. By "natural" Rousseau refers to the natural family system of Bernard and Antoine-Laurent de Jussieu, based in large measure on traditional family classifications long in use in Europe. See S. M. Walters, "The Shaping of Angiosperm Taxonomy," *The New Phytologist*, Vol. 60 (1961): 74–84. While the designation "natural" stands in opposition to Linnaean "artifical" classification, Linnaeus did in fact recognize this group as containing eryngium-type plants. See P. D. Giseke, *Praelectionis in ordines naturales plantarum* (Hamburg, 1792).

136. Rousseau refers to *girole*; if we take this to mean *girolle*, which is the closest corresponding French vernacular plant name, we find that he is referring to an edible mushroom also known in both English and French as *chanterelle*. This reference does not make sense in this context.

137. Godet and Boy de la Tour place this seventh in the series of eight letters.

138. All marguerites are indeed some form of daisy, but I have translated only *paquerettes* as daisies, in order to maintain the distinction between this plant and related ones.

139. See "Fleur," pp. 108–110 above.

140. Rousseau's term is *languette*, defined in Littré as "particularly, in botany, appendix which terminates the demi-florets of composite flowers, called also and more often ligule." In English the *languette* is known as as "ligular flower."

141. See "Demi-fleuron," pp. 105–106 above.

142. The flower known in French as "grande marguerite" refers to several species: *Chrysanthemum x superbum*, *C. maximum*, *C. vulgare*, and *C. leucanthemum*. Its English equivalents include Shasta daisy, Oxeye daisy, Bachelor's Buttons, and Marguerite.

143. See Rousseau's letters to the Duchess of Portland in this volume.

144. Godet and Boy de la Tour give the date as probably some time during the Spring of 1774 and place it last in the series of eight letters. They justify this chronology on evidence that it postdates Rousseau's letter of 21 January 1774 and predates that of 28 May 1774, "as one can see from certain details in the text. (See the last line of the letter of 21 January and the allusion to the 'fruit trees' in that of 28 May.)" See Godet and Boy de la Tour, 158, n. 1.

145. Leigh speculates that M. Tessier might perhaps have been a member of the banking family of Jean Texier. See Leigh, Vol. XL, 197, n. (c).

146. Suzanne Goncerut (1682–1775), sister of Isaac Rousseau, took care of Jean-Jacques Rousseau as a child. Rousseau sent her an annual monetary gift through the Delessert banking house. In the *Confessions*, Book I, Rousseau speaks of his adoration for her and his belief that her own musical gifts inspired his taste for music (*Collected Writings*, Vol. 5, 9–10).

147. Compare Darwin: "When, on the one hand, we see domesticated . . . plants, though often weak and sickly, yet breeding quite freely under confinement . . . we need not be surprised at this system . . . acting not quite regularly, and producing offspring not perfectly like their parents or variable." Darwin, 9.

148. These "kinds" of cherries are known as "cultivars."

149. Plums and related fruits listed here belong to the genus *Prunus*, a member of the family Rosaceae. Hence the common plum, or "plum proper," goes under the Latin name *Prunus domestica*. Some authorities place the peach and the almond in the genus *Amygdalus*.

150. This was a valid species according to Jackson and Hooker, but it is not recognized in *Fl. Eur.*; the genus is still valid, however.

151. This is now *Calamintha nepeta*.

152. This is now *Filipendula vulgaris*.

153. This is now *Linaria vulgaris*.

154. Rousseau questions how his correspondent would be unaware of this plant, used in France for both culinary and medicinal purposes.

155. Godet and Boy de la Tour place this letter sixth in the series of eight letters, in accordance with the chronology of composition, even though Rousseau himself placed this one last because his discussion of herbaria interrupted the order of his treatment of families of flowering plants. See Pléiade, IV, 1179, n. (a), 1195, n. 1. This letter treats the purposes and manufacture of herbaria, a subject of great import for botany then as today; Rousseau follows a tradition dating back to Luca Ghini (1490?–1556), who is credited with having produced the first herbarium in Europe, and Adriaan van den Spiegel (1578–1625), who produced an early written treatise on the subject, *Isagoges in rem herbarium libri duo* (Padua, 1606). The entry "Herbier" in the second edition of Claude Richard's revised fourth edition of J. B. F. Bulliard's *Dictionnaire élémentaire de botanique* (Paris, 1802) reproduces a similar text, which is taken from a purported manuscript of Rousseau on herbaria. See Leigh, Vol. XXXIX, 145–146, who reproduces the entry in part, as do the editors of the Hachette edition of Rousseau's *Œuvres Complètes*, vol. 6 (Paris, 1857), 300–302, note. See also Stafleu and Cowan, s.v. "Richard, Louis Claude Marie."

156. As a quire comprises 25 sheets of paper, Rousseau advises having 125 to 150 sheets each of gray and white paper on hand for this project.

157. A reference to the subsequent discussion of the daisy.

158. Rousseau's use here of *pédicule* may refer either to peduncle or pedicel, both of which were in use in his day. See Pléiade, IV, 1237, 1843, n. 1.

159. White Saxifrage is now a member of the Saxifragaceae, not the Rosaceae.

160. Forget-me-not is a Myosotis, which is not now considered a rose; it is a member of the Boraginaceae.

161. *R. acris* is now classed in the Ranunculaceae rather than in the Rosaceae.

162. *C. leucanthemum* is now *Leucanthemum vulgare*; its English equivalents are discussed in n. 142. We would call it an oxeye daisy or whiteweed; it is a tall, leafy plant in contrast with the smaller English daisy (*Bellis perennis*), which is presumably Rousseau's "petite marguerite."

163. A reference to Mme Julianne-Marie Boy de la Tour, née Roguin (1715–1780), the mother of Mme Delessert.

164. The aunt in question is Suzanne Goncerut. See n. 146.

165. The first part of this letter has been omitted as having no bearing on botany.

166. Gaujet may have gotten engaged or married. See Leigh, Vol. XXXIX, 183, n. (a).

167. "Tithymalus," an old word for spurge, is close to Rousseau's "Tithymale."

168. This plant is now *Spergularia media*.

169. "Margeline" ("morgeline" in Rousseau's spelling), while now rare, is attested in the *OED* as a synonym for chickweed or alsine.

170. Hence, one of the common names of this plant, which is fed to domesticated, caged birds, is "mouron des oiseaux," or "birds' pimpernel."

171. A Latin synonym is *M. borealis*.

172. This taxonomic innovation has not survived, although Linnaeus' outline of a natural method classed the genera *Malva* and *Alcea*, both discussed in this letter, together as "Columniferi." See *PB*, §77, 31. The Malvaceae are now in the order Malvales. See n. 23 for a discussion of Crantz.

173. The title "chevalier" which Rousseau applies to Carolus Linnaeus (Carl von Linné) refers to the patent of nobility he received from the Swedish crown for his services to science. The English equivalent, "Sir," would be awkward in this context.

174. "Until a complete revision has been undertaken this treatment of European plants must be regarded as provisional." *Fl. Eur.*, Vol. 2, 254.

175. See Rousseau's letters of 22 August 1771 and 16 July 1772 to Mme Delessert for related discussions of training the young to see and reason well.

176. Here Rousseau touches on what for him formed the crucial justification for the binomial nomenclature of Linnaeus, namely, the difficulties inherent in a multiplicity of names or designations for the same plant.

177. In order not to lose the effect of Rousseau's point here, I have left the French common names in the original. Although not attested in standard historical dictionaries of the French language, *talitron* may be a synonym for *Thalictrum*, the Latin name for meadow rue, a genus of the family Ranunculaceae. The common name *coquelourde* refers to a number of genera, including *Anemone* (fam. Ranunculaceae) and *Narcissus* (fam. Amaryllidaceae). Hence, in invoking this name without further specification, Rousseau points up the confusion in nomenclature. Argentine, also known as *Potentilla*, is a genus of Rosaceae; the leaves of the plants of this genus have a brilliant gold underneath face. The genus *Trifolium* (fam. Fabaceae) includes the many species of clover.

178. Margaret Cavendish Bentinck, Dowager Duchess of Portland (1715–1785), was the only daughter and heiress of Edward, second earl of Oxford. She married William Bentinck, second duke of Portland in 1734, and devoted the remaining fifty years of her life to her botanical garden and extensive museum at their estate of Bulstrode, Buckinghamshire. Her collections, organized by Linnaeus' student, Daniel Solander (see n. 184), were so large, that "Bulstrode was probably even more important than the British Museum. . . . Naturalists thronged to inspect it." Sadly, the collections were dispersed; their "eventual auction after her death required thirty-eight days." David E. Allen, *The Naturalist in Britain: A Social History* (London: Allen Lane, 1976), 29.

179. Rousseau refers to *The Herball* (London, 1597) of John Gerard (1545–1612), a barber-surgeon who oversaw the garden of the College of Physicians as well as his own garden at Holborn, in London. The *Herball* or *Generall Historie of Plantes* (London, 1597) served, along with the works of John Parkinson (discussed below, n. 312), as one of the pillars of seventeenth-century English botany, but was actually a translation of Dodoens' *Pemptades* (1583), which a Dr. Priest had al-

ready partly translated prior to Gerard's finishing the work. Rousseau refers here to the edition corrected by the herbalist Thomas Johnson (1600 or 1604–1644) and published in 1633. Gerard also authored *Catalogus arborum fructicum ac plantarum* (1596). See Arber, 129ff.

180. Rousseau refers here to the *Synopsis methodica stirpium britannicarum* of John Ray. See n. 12 on Ray. Rousseau owned the third edition of the *Synopsis* (London, 1724), anonymously amended by J. J. Dillenius); his annotated copy now resides in the library of Jesus College, Cambridge, to which it had passed from the library of Thomas Malthus. In 1772 Rousseau sold his botany texts to a fellow plant enthusiast, the Reverend Daniel Malthus, father of Thomas. Daniel Malthus in turn willed all his books on botany "in which the name of Rousseau is written" to a Jane Dalton; the books willed to Dalton seem to have disappeared without a trace. The only other book from Rousseau's collection to have come down to us is *Methodus foliorum, seu Plantae florae Monspeliensis, juxta foliorum ordinem, ad juvandum specierum cognitionem, digestae* (The Hague, 1751) of François Boissier de Sauvages de la Croix. The history of Rousseau's botanical texts is discussed in Edward Gray, ed. *The Malthus Library Catalogue: The Personal Collection of Thomas Robert Malthus at Jesus College, Cambridge* (New York: Pergamon, 1983), lx.

181. Rousseau refers to his protector, George Keith (?1686–1778), tenth countmarshal of Scotland and a supporter of the Stuart Pretender in 1715. Exiled as a traitor from his native land and deprived of his fortune, Keith served in the Spanish army and later entered the service of Frederick the Great, King of Prussia, who appointed him ambassador to Versailles in 1751. In 1754 Keith was made governor of the principality of Neuchâtel where he met Rousseau, when the latter was in exile there (1763–1765). Keith was something of a *philosophe* and a free thinker; he knew Rousseau's work well before making his acquaintance, and in a letter of 1755 held up his own unusual household (consisting of a Turk, a Kalmuck, an African, and an adopted daughter—his "petite sauvage"—whose father had been a Janissary captain) as examples of "the ancient natural purity of men" to which Rousseau pointed in his second *Discours*. See Leigh, Vol. III, 177–178.

182. Subsequent correspondence shows Rousseau's interest in cryptogams, that is, plants that reproduce by means of spores rather than flowers and seeds. The mosses, for example, belong to their own class, the Bryopsida, which belongs to the division Bryophyta, as distinguished from the divisions Magnoliophyta (angiosperms or flowering plants) and Pinophyta (gymnosperms such as conifers).

183. Rousseau refers here to Ray's *Synopsis* as annotated by James Petiver (1658–1718), botanist, entomologist, and apothecary.

184. Daniel Carl Solander (1733–1782), a favorite student of Linnaeus, propagated the Linnaean system in England. Solander's removal to England, his transfer of loyalties to Joseph Banks (longtime President of the Royal Society), and failure to correspond or send specimens to his mentor caused a permanent rift between master and disciple. See Lisbet Koerner, "Purposes of Linnaean travel: A preliminary research report," in *Visions of Empire: Voyages, botany, and representations of nature*, ed. D. P. Miller and P. H. Reill (Cambridge: Cambridge University Press, 1996), 127, 129. Linnaeus offered Solander a professorship at St. Petersburg and wanted Solander to succeed him at Uppsala, but Solander declined. In 1768 Solander embarked with Joseph Banks (1743–1820) on the Royal Society's voyage to

observe the transit of Venus across the sun in Tahiti in 1769; this expedition, under the command of Lt. James Cook, was also charged with searching out the great Southern continent, New Holland (now Australia). This three-year circumnavigation of the globe yielded rich finds in natural history, especially botany; its subsequent importance for botany, natural history generally, the English Enlightenment, and the British Empire cannot be overestimated. (Note, however, that although descriptions for many of the new species collected during the voyage were drawn up, they were not published.) In 1771 Solander became secretary to Banks and accompanied his patron to Iceland in 1772. Solander held important posts in the newly founded British Museum, whose natural history section he organized. As a major authority on taxonomic questions, he named new plants acquired by the royal botanical gardens at Kew. In 1779 the Duchess of Portland engaged Solander to organize her natural history collections.

185. According to Leigh, Vol. XXXIII, 36, n. (a), this book is Ray's *Synopsis*, but in his letter of 12 February Rousseau has already thanked the Duchess for this text. For her part, the Duchess writes on 10 March 1767 that she is sending Ray's *Synopsis* to Rousseau.

186. The *Adiantum* is sometimes an epiphyte, a plant growing on, but not nourished by, another.

187. Rousseau refers here to *Ornithogalum umbellatum*, a bulbous herb that belongs to a large genus of Old World plants. Since *Ornithogalum* has bulbs, Rousseau's plant cannot be a member of the genus because it lacks them. The name "Star of Bethlehem" appears in the original manuscript of the letter.

188. The book in question is probably Ray's *Synopsis*, which the Duchess expected to send Rousseau the previous autumn, as announced in her letter to him of 10 September 1766: "I shall send you Ray's Synopsis by the first opportunity & with it Petiver. . . ." Quoted in Leigh, XXX, 348. It might also have been Sir John Hill's Linnaean version of Ray, *Flora Britanica* (London, 1760), to which the Duchess seems to refer in a letter of 10 February 1767: "I met with a book . . . which I wish to convey to you, it is Ray's Synopsis of British Plants in Linnaeus' Method" (quoted in Jansen, 304). Rousseau's letter of 12 February 1767 indicates, however, that he already has come into possession of an edition of Ray's *Synopsis*, possibly one of its later editions produced by Dillenius or Hill.

189. Rousseau refers to *Flora britanica* (London, 1760), Sir John Hill's Linnaean revision of Dillenius' anonymous revision of the third edition of Ray's *Synopsis* (London, 1724). Rousseau's spelling of the title is preserved in the text. Hill was the first to treat British flora from a Linnaean standpoint. Also of note are his *British Herbal* (London, 1756) and *Vegetable System*, 26 vols. (London, 1759–75), which included 1,600 copper plates and descriptions of 26,000 plants. Hill (1714–1775), a London apothecary, physician, botanist, and sometime gossip columnist, produced a vast literary output, ranging from English-language herbals through astronomy, husbandry, medicine, and works of fiction. He took the title "Sir" after receiving the Swedish Order of Vasa in 1774. Leigh gives Hill's date of birth as 1707, while Laudon's research convincingly places it in 1714. See J. R. Laudon, "The Date of Birth of Sir John Hill (1714–1775)," *Archives of Natural History*, Vol. 10, no. 1 (1981): 65–66. Hill enjoys the distinction of probably being the only botanist to have earned the sarcasm of a famous actor; Garrick said of him: "For

physic and farces his equal there scarce is. / His farces are physic, his physic a farce is." Quoted in W. T. Stearn, "The Reception of the *Species plantarum* in England and Its Influence on British Botany," *Species plantarum*, facs. ed. (London: The Ray Society, 1957), 79.

190. Rousseau refers to the *Synopsis* of Ray, which, as a pre-Linnaean work, gives multi-word names to plants. It is difficult to give a modern name for this plant. *Centaurium* is a "taxonomically difficult genus. Numerous taxa have been described, but there is no uniformity in their treatment by various authors. Most of the intraspecific taxa hybridize freely in natural habitats, the hybrids being more or less interfertile." *Fl. Eur.*, Vol. 4, 57.

191. This plant is now classified as *Elatine hydropiper*. For a full reference to Sébastien Vaillant (1669–1722), see n. 33. Vaillant cites "Alsinastrum serpillifolium, flore albo tetrapetalo" in *Botanicon parisiense*, 5 and table 2, figure 2, and "Alsinastrum serpillifolium, flore roseo tetrapetalo" in *Botanicon parisiense*, 5 and table 2, figure 1. See also *Sp. Pl.*, 367–368.

192. It has not been possible to ascertain who this friend was. Leigh does not explain the reference.

193. The current name for this plant is *Narthecium ossifragum*. Rousseau is referring to Gaspard Bauhin's *Pinax theatri botanici* (Basel, 1623).

194. This is now called *Cicendia pusilla*.

195. The Royal Veterinary School at Lyon, the first of its kind in Europe, was founded in 1761 by Claude Bourgelat. See Leigh, XXXVI, 5, n. (a). Rousseau's botanical correspondent, Marc Antoine Claret de Flerieu de Latourette (1729–1793), established the botanical garden in 1763, appointing Abbé François Rozier (1734–1793) as its director; Rozier and Latourette accompanied Rousseau on the expedition to Mount Pilat.

196. This species is now called *Gentianella campestris*.

197. This species is now called *Swertia punctata*.

198. Rousseau at this time used an alias, as he was still technically liable for arrest under the 1762 warrant issued by the *parlement* of Paris.

199. Rousseau's names are as he wrote them; nomenclatural revisions are indicated in the notes.

200. *Meum athamantum*.

201. *Impatiens noli-me-tangere*.

202. *Calamintha grandiflora*.

203. *Linaria purpurea*.

204. This is now two species: *Athyrium felix-femina* and *A. distentifolium*.

205. *Dryopteris filix-mas*.

206. *Moehringia muscosa*.

207. Lichens are "a class of cellular cryptogamic plants, often of a green, grey, or yellow tint, which grow on the surface of rocks, trees, etc. . . . According to the modern theory . . . the lichen is a fungus parasitic upon an algal. . . ." See *OED*. *Lichen* is no longer a recognized genus, having been subdivided into many genera; usnea is "a large genus of fruticose lichens . . . but no genus presents more difficulty when it comes to recognising many of the individual species." See William Martin and John Child, *Lichens of New Zealand* (Wellington: A. H. & A. W. Reed, 1972), 174. Fruticose lichens are bushy or pendulous; usnea have a thallus consisting of round stems.

In 1753 Linnaeus mentions eighty species of lichens (already a very large genus compared with other genera), *Sp. pl.* 1140 ff. He classifies lichens with the algae in Cryptogamia, the twenty-fourth class of the sexual system, a residual class of those plants that were unclassifiable in the sexual system. Lichens were not well understood in the mid-eighteenth century, and were often mistaken for mosses, hence Dillenius' inclusion of lichens in his *Historia muscorum* [History of mosses] (Oxford, 1741). Note that without Rousseau's own specimen, it is not possible to make a definitive identification of the lichen referred to here. Personal communication, Barbara Polly, Lichenologist, Te Papa, Museum of New Zealand, Wellington, New Zealand.

208. The "papers" to which Rousseau refers are those on which he places plant samples to dry prior to entering them in a herbarium. In the myth of Psyche, the woman abandoned by Cupid becomes the slave of Venus, who burdens her with a multitude of tasks.

209. "No. 762" is found in Albrecht von Haller, *Historia stirpium indigenarum inchoata*, Vol. I (Basel, 1768), 334–335. It equates to *S. glaucum* of Linnaeus, *Sp. Pl.*, 260. Note that *Seseli* is "a taxonomically difficult genus containing a number of rare or very local species." *Fl. Eur.*, vol. 2, 334.

210. *Cotyledon umbilicus*.

211. See n. 209.

212. *Lactuca viminea*.

213. *Calamintha grandiflora*.

214. *Meum athamanticum*.

215. "C.B." may refer to Caspar (Gaspard) Bauhin, and therefore to a description from Bauhin's *Pinax*.

216. *Lichen barbatus* is the Linnaean name (*Sp. pl.*, 1155) for *Usnea barbata*, the name assigned to this lichen by Dillenius in his *Historia muscorum* (Oxford, 1741), 63. The lichen Rousseau refers to earlier (see n. 205) as "Lichen usnea," may be related to "Lichen barbatus" since both "usnea" and "barbatus" refer to beardedness. Usnea are also known as "Beard moss," while "barbatus" means "bearded, provided with long weak hairs." See Stearn, s.v. "Barba." In the fourth century B.C.E. Theophrastus refers to *Usnea barbata* as "[t]he substance which some call tree-moss and which resembles rags." See his *Enquiry into Plants*, Vol. I, trans. A. F. Hort (Cambridge: Harvard University Press, 1916), 209.

217. *Peucedanum cervaria*.

218. *Linaria purpurea*.

219. *Silene otites*.

220. Rousseau refers to fig. 1 of Table 31 of Micheli's *Nova Plantarum Genera* (Florence, 1729). (See n. 21 on "Micheli" or Michelius). Linnaeus cited Micheli for *Cyperus*, but not for this one. Micheli's diagnosis can be translated as: "a Cyperus running with a smelly root, spikelets about one inch in length and a linea [i.e., one-twelfth of an inch] wide." Personal communication, Michael Stieber, Morton Arboretum, Lisle, Illinois. Rousseau likewise refers to this problem of identification in a letter of 17 December 1769 to Latourette (see below).

221. Leigh identifies this work as William Mason's poem, *The English Garden* (1772), reprinted many times. Leigh, Vol. XXXIX, 42–43, n. (e).

222. Rousseau speaks of himself as the first "en terre ferme" to praise the English garden; the statement is ambiguous, but it might refer to the Continent. Leigh

suggests that the allusion is to Rousseau's *La Nouvelle Héloise*, and the garden of Elysium created by the novel's heroine, Julie. Leigh, Vol. XXXIX, 43, n. (f). See also *Collected Writings*, Vol. 6, 387–400.

223. The term translated here as "learned" is *savant*. On the translation of *savant*, see R. Hahn, "Scientific Careers in Eighteenth-Century France," in *The Emergence of Science in Western Europe*, ed. M. Crosland (London: Macmillan, 1975), 128.

224. Rousseau refers to the withdrawal of Joseph Banks and Daniel Carl Solander from the second great Pacific voyage of James Cook. Banks and Solander accompanied then-Lieutenant Cook as shipboard naturalists on his first, epochal Pacific voyage on the *Endeavour* (1768–1771), which mapped the flora and fauna as well as coastal topography of Tahiti, New Zealand, and Australia. They wished to make a second trip on the *Resolution*, but the Royal Navy refused to make modifications to Cook's ship that Banks claimed to require to accommodate his party. See John Gascoigne, *Joseph Banks and the English Enlightenment* (Cambridge: Cambridge University Press, 1994), 9. For a firsthand account of the first voyage, see Sir Joseph Banks, *The Endeavour Journal of Joseph Banks, 1768–1771*, ed. J. C. Beaglehole, 2 vols. (Sydney: The Trustees of the Public Library of New South Wales in association with Angus & Robertson, 1962).

225. *Plantago uniflora* of Linnaeus was renamed *Littorella juncea* (Jackson and Hooker); it is now *L. uniflora*. See *Fl. Eur.*, Vol. 4, 44. Rousseau's *P. uniflora* should not be confused with that of Hooker, reported in *Flora novae zelandiae* (London, 1853) and still recognized.

226. M. de St. Paul is Horace de Saint-Paul (1729–1812), secretary of the English ambassador in Paris from 1772.

227. Pierre Liotard (?1729–1796), the son of a common laborer, served in the Spanish and French armies and worked as a weaver prior to taking up employment with his uncle, Claude Liotard, a dealer in plants (*marchand herborist*) in Grenoble. Pierre acquired a sound grasp of botany and learned Latin to read Linnaeus. In 1782 he became director of the botanical garden of Grenoble. He was closely associated with the botanists Antoine Gouan and Pierre Clappier, recipients of letters in this collection. Rousseau is supposed to have liked Liotard's unpolished demeanor. See Leigh, Vol. XXXVI, 172.

228. Rousseau refers to the first volume of the second edition of *Sp. pl.* Volume one of this edition appeared in 1762; volume two in 1763.

229. Pierre Clappier (1740–1818) was on the medical faculty of Montpellier. Like most medical practitioners of the day, he would have had training in pharmacological botany, but he also pursued botany as an avocation together with Pierre Liotard and Antoine Gouan (see nn. 227 and 271).

230. Rousseau is probably referring to Dillenius, *Historia Muscorum* (Oxford, 1741), which treats six hundred species of mosses, liverworts, lycopods, algae, lichens, and other lower plants. See n. 207.

231. "Osiris" is now "Osyris."

232. The "Bastille" is a mountain in the neighborhood of Grenoble.

233. By "false acorus" Rousseau might mean *Iris pseudoacorus*. Meadow saffron or autumn crocus, a liliaceous plant to which Rousseau refers not by its Latin name, but by its common French name, *colchique*, is also known as "colchicum" in English (and is placed in the Colchicaceae).

234. Nenuphar is another name for the European white or yellow water lily, a member of the Nymphaeaceae family. The lily to which Rousseau refers should therefore be *N. alba*.

235. Pierre-Alexandre Du Peyrou (1729–1794) was born in Surinam, the son of a counsellor in the Court of Justice in Dutch Guyana. After the death of Du Peyrou's father, his mother remarried a member of a prominent Neuchâtelois family and relocated there with her husband and son. Du Peyrou counts as one of Rousseau's most loyal friends, and with Paul Moultou served as Rousseau's literary executor. Between severe attacks of gout, he belonged to the group of Neuchâtel botanophiles Rousseau calls the "*collège de botanique*" (see Letter of 10 June 1765 to Abraham de Pury in Leigh, Vol. XXVI, 31).

236. Abraham Gagnebin (1707–1800), a longtime associate of Albrecht von Haller (see n. 24), spent nearly his entire life in the small hamlet of La Ferrière in the Swiss Jura, but his extensive knowledge of the local flora was legendary; according to Rousseau's associate, Louis-François d'Escherny, Gagnebin could identify between twelve and fifteen thousand plants at sight, a talent that earned him the epithet, "le parolier." Rousseau and his friends engaged Gagnebin at twelve pounds per day to serve as their botanical guide to the local flora. See Louis-François d'Escherny, *Mélanges de littérature, d'histoire, de morale et de philosophie*, vol. 3 (Paris: Bossange & Masson, 1811), 42.

237. Rousseau thought Du Peyrou's most recent attack of gout was clearing up, but in his letter of 16 June 1765 to Rousseau, Du Peyrou makes it clear he is still unable to undertake such an expedition. See Leigh, Vol. XXVI, pp. 45–46.

238. Rousseau is probably referring to the *Sp. pl.* and *Methodus foliorum* of François Boissier de Sauvages de la Croix (1706–1767). Rousseau eventually acquired his own copy of the latter work, which he later sold to Daniel Malthus in 1772. See n. 180. Sauvages, a French physician, botanist, and professor of medicine at Montpellier, was prominent among the Linnaeans at Montpellier. His pupils included Louis Gérard, Philibert Commerson, and Antoine Gouan, the last a correspondent to whom Rousseau addressed letters included in this volume. He produced a variety of medical treatises on physiology, nosology, pathology, embryology, and medication. His *Methodus foliorum, seu plantae flore monspeliensis* (The Hague, 1751) provided a method for recognizing plants by their leaves.

239. The "great purple gentian" to which Rousseau refers is probably *Gentiana purpurea*.

240. This species is now known as *Arctostaphylos uva-ursi*.

241. "Chamaerhododendros" are species of low-growing rhododendrons or Rhodothamnus charnaecistos.

242. According to Leigh, Rousseau is referring to Haller's *Iter Helveticum anni 1739* (Göttingen, 1740). See Leigh, Vol. XXXVI, 212, n. (d), and Vol. XXXIV, 270, n. (k). In a letter of 28 December 1767, Rousseau had specifically requested Rey to obtain this text for him in Amsterdam. However, given that Rousseau here asks for the "exact title" of Haller's work, it is possible he may have in mind another, more recently published work on the Swiss flora, namely, *Historia stirpium indigenarum Helvetiae inchoata* (Bern, 1768) or *Enumeratio methodica stirpium Helvetiae indigenarum* (Göttingen, 1742). De Beer indicates that by 21 July 1769 Rousseau had come into possession of the *Historia stirpium*. Rousseau knew Haller's work, not

only by general reputation, but also through Haller's close associate, Abraham Gagnebin; the latter's correspondence with Haller relating to Rousseau is reproduced in this volume. See Sir Gavin de Beer and Bernard Gagnebin, "Abraham Gagnebin de la Ferrière d'après sa correspondance," *Bulletin de la Société neuchâteloise des sciences naturelles*, Vol. 80 (1957): 69.

243. See n. 7. In his letter of 28 December 1767 Rousseau had asked Rey to obtain Clusius' *Rariorum plantarum historia* (Antwerp, 1601).

244. "Apocyn" refers to *Apocynum*, American perennials with small white or pink flowers belonging to the Apocynaceae, a family of tropical herbs, shrubs, and trees. The silk tree (*Albizia julibrissin*), or *arbre de soie*, is native to Iran, China, and Japan; it is also known as "pink siris" or "Persian acacia" and should not be confused with "*arbre à soie*," an entirely different species (*Calotropis procera*). The name translated here as "sugar apple" is known variously in French as "pomme de canelle," "pomme canelle, or "pommier canelle." That Rousseau was interested in tropical trees from the Americas is attested in his unpublished notes from botanical works, which include entries on the mangrove, calabash, and campeche wood. His principal source is Nicolaus Joseph von Jacquin (1727–1817), whose *Selectarum Stirpium Americanarum Historia* (Vienna, 1763) is one of the first treatments of the subject.

245. "Madame Governor" (*madame la commandante*) is the mother of Du Peyrou; the title probably refers to the rank of her first husband, who had been governor of Dutch Guyana.

246. The text in question is "la vertu plus nécessaire au Héros" [the virtue most necessary to Heroes] (*Collected Writings*, 4, 1–11).

247. Jean-François Séguier (1703–1784), a French botanist and archaeologist, studied law at Montpellier and botany at Paris with Antoine de Jussieu. His *Plantae Veronenses*, 3 vols. (1745–1754), grew out of the nineteen years he spent in Verona, Italy. The generic names in this work are still used.

248. This plant is now *Ranunculus thora*.

249. According to d'Escherny, Rousseau dubbed Gagnebin "le Parolier." See d'Escherny, 109. Leigh instead identifies "le Parolier" as Rousseau's friend, and Du Peyrou's father-in-law, Colonel Abraham de Pury. Leigh, Vol. XXXVII, 62, n. (c). While de Pury botanized with Du Peyrou, d'Escherny, and Rousseau, Gagnebin, not de Pury, was gathering plant samples on Rousseau's behalf.

250. Rousseau speaks of "la morale," that is, "morality," "ethics," or "morals."

251. This person has not been identified.

252. De Beer, the source for Leigh's presentation of this excerpt, estimates the date of this undated letter as "1er III 1769," that is, 1 March 1769 (not 3 March 1769, as stated in Leigh, vol. XXXVII, 63). See de Beer, "Abraham Gagnebin de la Ferrière d'après sa correspondance," 70.

253. Leigh believes this was Haller's *Nomenclator ex Historia plantarum indigenarum Helvetiae* (Bern, 1769); in the note to this letter, Leigh refers the reader to a letter of 10 August 1768, in which Abraham Gagnebin wrote Haller to request "two copies of your Nomenclator" on behalf of du Peyrou. See Leigh, Vol. XXXVI, 29–30, n. (c), and Vol. XXXVII, 114–115, n. (a). De Beer, on the other hand, infers that the work referred to was Haller's *Historia stirpium Helvetiae inchoata* (Bern, 1768). See de Beer, 69. Leigh's surmise seems less than certain, however; du Peyrou's request to Gagnebin does not definitively prove that the book

Rousseau received in the summer of 1769 was in fact the *Nomenclator* rather than the *Historia stirpium*. The confusion is understandable, given that the first work, an amended list of the plant names contained in the second, was originally to have been published in 1768. On this point, see Stafleu and Cowan, s.v. "Haller."

254. This is a reference to Louis-François de Bourbon, Prince de Conti (1717–1776), whom Rousseau visited during his stay in Nevers. The Prince was governor of Poitou and had been a successful military commander, but whom King Louis XV set aside in 1757, at least in part due to his favorable disposition toward the *parlements* (ancient judicial bodies, some of which took up the cause of the people against the crown in the late *ancien regime*).

255. The first paragraph of this letter, having no bearing on botany, has been omitted.

256. This refers to an episode during an herborization Rousseau undertook with Du Peyrou, de Pury, and d'Escherny in the summer of 1764. See d'Escherny, 146.

257. Sancho Panza is the traveling companion of Don Quixote.

258. Rousseau refers to Charles-François de Monestay (1697–1776), marquis de Chazeron, a French military officer, who crossed the Rhine on several military expeditions.

259. Bear's grape (*raisin d'ours*), is also known as "bearberry" and "cranberry"; this is usually a species of *vaccinum* or *oxycoccus*. It is a member of *Arctostaphylos*.

260. Another more common name for bistort (*Polygonum bistorta*) is snakeweed, so named for its twisted root.

261. More common names for this plant are monk's hood or wolf's bane. *Napellus* is now *Aconitum*.

262. This is now called *Cicerbita alpina*.

263. *Lichen islandicus* is now *Cetraria islandica* ("Iceland moss"), a denizen of alpine regions of the Northern Hemisphere and the lava slopes and plains of Iceland; it is distinguished by the short hairs that surround the lobes which Rousseau here terms "leaves."

264. Rousseau refers to the Hôtel Du Peyrou in Neuchâtel, Switzerland.

265. See n. 229 for information on Pierre Clappier.

266. The book in question is *Démonstrations élémentaires de botanique*, 2 vols. (Lyon, 1766), an important work of botanical popularization by Marc Antoine Louis Claret de Latourette (1729–1793) and Abbé François Rozier (1734–1793). The authors accompanied Rousseau on the expedition to Mont Pilat that forms the principal subject of several of these letters. Latourette left an anonymously published account of this journey in his *Voyage au Mont-Pilat* (Avignon, 1770). Rousseau's letters to Latourette (which Rousseau writes as "La Tourette") appear in this collection. Latourette, a fiscal court judge in Lyon, served as permanent secretary of the Lyon Academy (1767–1793) and was closely involved with the development of the botanical garden of the Royal Veterinary School. Abbé François Rozier (1734–1793) was likewise a prolific author and editor of works on agriculture.

267. Leigh notes that this "humorous neologism" is unknown in classical Latin. Leigh, Vol. XXXVI, 215, n. (c).

268. Johann Jakob Dillenius published an amended third edition of John Ray's *Synopsis methodica stirpium britannicarum* in 1724, which Rousseau owned. Rous-

seau mentions this work in his letter of 12 February 1767 to the Duchess of Portland. "Dr. Hill" was Sir John Hill, whose *Flora britanica* provided a Linnaean revision of Dillenius' third edition of Ray's *Synopsis*.

269. The book to which Rousseau refers is that of nature.

270. This genus is probably that now classified as *Cypripedium*, including *C. calceolus*.

271. Antoine Gouan (1733–1821), a prominent Linnaean botanist at Montpellier, wrote two works to which Rousseau refers in his correspondence: *Hortus regius monspeliensis* (Lyon, 1762), and *Flora monspeliaca* (Lyon, 1764). Gouan subsequently published *Illustrationes et observationes botanicae* (Zürich, 1773), *Explication du système botanique du chevalier von Linné* (Montpellier, 1787), and *Herborisations des environs de Montpellier* (Montpellier, 1796).

272. Pierre Magnol (1638–1715), a physician-botanist of Montpellier, gave his name to the genus "Magnolia." Of his four works, the most original is *Prodromus historiae generalis plantarum* (Montpellier, 1689); in it "he introduced the concept of plant families with faint evolutionary overtones" (Stafleu, 267). His other works are *Botanicum monspeliense* (Lyon 1676), *Hortus regius monspeliensis* (Montpellier, 1697), and *Novus caracter plantarum* (Montpellier, 1720). Given that the gentian in question is native to Montpellier, Gouan may have drawn "the synonym of Magnol" from either the *Botanicum monspeliense* or the *Hortus regius monspeliensis*. The reference to Sauvages would be to his *Methodus foliorum*, referred to in Rousseau's letter of 11 June 1765 to Du Peyrou, p. 196 above.

273. Rousseau refers to André Faure (1739–1815), bookseller-printer in Grenoble, 1754–1781. It was on the road near Faure's home that the incident of the supposedly poisonous berries occurred in the seventh Walk of the *Reveries*.

274. This is now called *Conyza canadensis*.

275. See "Fructification" (p. 116). This term refers not only to the processes of fertilization and fruiting, which comprise the English definition of the term, but also to the "assemblage of all the natural instruments devoted to this operation," that is, the reproductive structures. Linnaeus defines "Fructificatio" by first naming the parts of the flower: calyx, corolla, stamen, pistil, pericarp, semen, and receptacle. See *PB*, §§86–87.

276. This is now called *Silene nocturna*.

277. *Poa rigida* is now *Desmazeria rigida*.

278. See "Diecie."

279. *Cucubalus otites* is now *Silene otites*.

280. See n. 271 identifying this recipient.

281. Leigh believes "De Bure" is Jean de Bure (d. 1786), a Paris bookseller. Leigh, XXXVII, 155, n. (b). "Columna" is Fabius Columna or Fabio Colonna (1567–1640?); Leigh gives the death year as 1630, while Arber says 1650; the Hunt Library's *Biographical Dictionary* (Boston, 1972) and the Bronx Botanical Garden's *Biographical Notes upon Botanists* (Boston, 1965) agree on 25 July 1640). Columna was a lawyer and scion of an important Roman-Neapolitan family. He came to botany as an epileptic interested in finding an effective treatment for his affliction. Columna discovered his wonder drug, valerian, in *De materia medica* of Dioscorides (see n. 5, Introduction); this discovery impelled him to undertake a clarification of the knowledge of plants. This effort culminated in *Phytobasanos sive*

plantarum aliquot historia (Naples, 1592), and *Minus cognitarum stirpium aliquot, Ekphrasis*, 2 vols. (Rome 1606, 1616). See Arber, 97–100, 282.

282. Linnaeus' *Hortus Cliffortianus* (Amsterdam, 1737) contains the first use of his method. In it, he enumerates the European and exotic plants found in the extensive gardens of the Anglo-Dutch financier George Clifford for whom Linnaeus served as resident physician and garden superintendent during his Netherlands sojourn (1735–1738). This work was a forerunner to Linnaeus' *Species Plantarum* (Stockholm, 1753), now accepted as the starting point for modern botanical nomenclature. The *Amoenitates academicae*, a ten-volume collection of the 186 dissertations completed under Linnaeus at the University of Uppsala, were published between 1749 and 1790 in Leiden, Stockholm, Amsterdam, and Erlangen. In accordance with Swedish academic tradition, "the student defended in public debate a thesis for which the professor was primarily responsible"; the defense took place in Latin and was a test of memory and skill in disputation rather than originality. See W. T. Stearn, "The *Amoenitates academicae* and the Authoriship of Linnaean Dissertations," in *Species Plantarum: A Facsimile of the First Edition*, Vol. I (London: The Ray Society, 1957), 51. Rousseau is right to attribute these theses to Linnaeus (see Leigh, XXXIX, 49, n. [b]). Rousseau's last reference is to Gouan's *Hortus Regius Monspeliensis* (Lyon, 1762) and *Flora Monspeliaca* (Lyon, 1764).

283. The actual title of Gouan's work is *Historia piscium* (Strasbourg, 1770).

284. This is now *Peucedannum palustre*.

285. Rousseau refers to Guettard's *Observations sur les plantes*, 2 vols. (Paris, 1747) which focuses on the plants of Etampes. See Leigh, Vol. XXXVII, 155.

286. The name seems problematic, possibly due to orthography; there was a *Seseli pyrenaeum* of Linnaeus which has been renamed *Selinum pyrenaeum*.

287. The text seems to be corrupt; Leigh indicates there is a "trou" (hole) after "lib." See Leigh, XXXVII, 153, 154, n. 7. *Athamanta libanotis* is now *seseli libanotis*.

288. Crantz' name was actually *Selinum carvifolium*; it is now *Peucedanum carvifolium*. See H. J. N. Crantz, *Stirpium austriacarum*, Vol. I (Vienna, 1769), 162.

289. The *Selinum carvifolia* of Linnaeus is still used, while the *Selinum carvifolium* of Crantz has been renamed.

290. Joseph Dombey (1742–1794), a student of Gouan, traveled to South America in search of rare plants and other curiosities, but the Spanish confiscated his finds at Cadiz. Dombey enthusiastically welcomed the French Revolution and died as a prisoner of corsairs in the Antilles during a trip undertaken in the service of the revolutionary regime. Dombey's herbarium may have been the one Rousseau left to the Girardin family; the Girardin herbarium may, in turn, be the one Sotheby's sold on behalf of an anonymous client to the Public Library of Neuchâtel in 1979. See Leigh, Vol. XXXV, 308, n. (d).

291. This species name is still used.

292. In other words, *Seseli hippomarathrum*.

293. See n. 209. The *Seseli bienne* of Crantz is now called *Seseli annuum*.

294. The actual name is *Prenanthes viminea* of Linnaeus, now renamed *Lactuca viminea*.

295. *Proecanthes* was not a recognized genus in the eighteenth century, but

Rousseau may mean *Prenanthes viminea* of Linnaeus, in which case the current name is *Lactuca viminea*. Concerning "lichen islandicus," see n. 263.

296. Jean-Emmanuel Guignard, viscount de Saint-Priest (1714–1786), was honorary "maître des requêtes" and *intendant* for Languedoc from 1751 onward. See Leigh, vol. XXIV, 184, n. (e).

297. *Linum radiola* is now *Radiola linoides*; *Tricomanes tumbrigense* is reported by Linnaeus in *Sp. pl.*, 1098, no. 6 as *Trichomanes tumbrigense*. *Flora Europaea* reports one species in this genus, *Trichomanes speciosum*, but notes that the genus resembles the genus *Hymenophyllum*, and *Hymenophyllum tumbrigense* is an accepted species. *Fl. Eur.*, Vol. 1, 13.

298. Rousseau has already referred to this plant on pp. 209–210 above. Crantz' name is *S. carvifolium*, not *S. carvifolia*, which is the Linnaean name.

299. For Haller's *seseli* 762, see n. 209. Crantz, *Classis umbelliferarum* (Leipzig, 1767), 93 cites Vaillant, *Botaniscon parisiense* (Leiden and Amsterdam, 1727), table IX [9], figure 4, "Foenciculum sylvestre, annum, Tragoselini odore, umbella alba." *Seseli glaucum* of Linnaeus is now *S. montanum*.

300. See n. 266 on Marc-Antoine Claret de Latourette (1729–1793).

301. This is possibly a reference to Rousseau's theory that melodious Italian, rather than guttural French, is the language of music. Italian is "sweet, sonorous, harmonious and more accented than any other" language. Pléiade, V, 297.

302. "Cabinet" in this context refers to the natural history cabinet of curiosities and specimens—zoological or mineral, as distinguished from the herbarium, a collection of dried plants, usually organized systematically (e.g., according to the system of Linnaeus).

303. I retain Rousseau's original spelling; he refers to Mount Pilat, a mountain in the vicinity of Lyon, where he herborized with Latourette and others in July 1768. See also Latourette's *Voyage au Mont-Pilat* (Avignon, 1770).

304. "Didynam" refers to any member of the "Didynamia," that is, the fourteenth class of the Linnaean system of sexual classification. This class of plants has two pairs of stamens, one pair of which is shorter than the other; it includes digitalis, lavender, and antirrhinum or snapdragon.

305. In his *Voyage au Mont-Pilat* (Avignon, 1770), Latourette seems to refer to this note, missing from the manuscript of the letter itself: "Since this [account] was written, I have had occasion to make use of the excellent notes which were furnished to me, on some late[-blooming] plants of Mont-Pilat, by a celebrated man, who, after having pierced with a philosophical eye the innermost recesses of the human heart, did not think it unworthy of him, to fix his gaze on *herbs* and *mosses*," p. 106, note (emphasis original).

306. See n. 220 accompanying letter of 21 December 1769 to the Duchess of Portland.

307. Rousseau's phrase "S'amuser entre la nature et soi" is not easily rendered in English.

308. This species is now divided into two, *Linaria purpureum* and *Misopates orontium*.

309. The *Antirrhinum arvense* of Linnaeus is now *Linaria arvense*.

310. This person has not been identified. Leigh, Vol. XXXVII, 214, n. (g).

311. The genus, but not this particular species, is recognized.

312. John Parkinson (1567–1650; Leigh gives the year of death as 1630) served as apothecary to James I and was appointed "Botanicus Regius Primarius" to Charles I of England. His two principal works are *Paradisi in Sole, Paradisus Terrestris* (London, 1629) and *Theatrum botanicum* (London, 1640). (Leigh gives the title of the first as *Paradisus Terrestris*.) The first was a description of English flower gardens, while the second was a much more ambitious attempt at a general description of plants, largely from a medical perspective. For a note on Gerard, see n. 179.

313. For an earlier reference to Valerius Cordus, see Rousseau's Introduction. Hieronymus Tragus (Bock) (1498–1554), German physician, teacher and curator of the botanical gardens at Zweibrücken, authored *de Stirpium, maxime earum, quae in Germania nostra nascentur* (Strasbourg, 1552), *New Krëutter Buch* (Strasbourg, 1537), and *Krëutter Buch* (Strasbourg, 1546). Rousseau does not identify which work he plans to give Latourette, but given his theoretical rather than medical interests, it is reasonable to conjecture that he means the first work.

314. While *C. vulpina* is still recognized, its "distribution is very uncertain because of confusion with *C. otrubae*, which has in general a more western and southern range and is probably the commoner species over most of Europe." *Fl. Eur.*, Vol. 5, 297. *C. leporina* is now *C. ovalis*.

315. This is the motto of the republic of Geneva. Leigh, Vol. XXXVII, 214, n. (p).

316. The first paragraph of this letter, having no bearing on botany, has been omitted.

317. Okra, known in Rousseau's day as *Hibiscus esculentus*, is now *Abelmoschus esculentus*. The "Islands" are the Caribbean West Indies. "Gumbo" or "Gombo" is a word of Bantu origin, of which "Gombault" is a French version.

318. See n. 217.

319. Charles-Pierre Claret de Fleurieu (1738–1810) was a renowned hydrographer, naval official, and administrator.

320. "Herbailles" is not attested in French.

321. This is a reference to the horses who draw the chariot of the Greek sun god, Phoebus or Helios.

322. Rousseau refers to Georges Louis Leclerc, comte de Buffon (1707–1788), intendant of the Cabinet du roi, to whose species theory he refers in the entry "Aphrodite." See n. 33.

323. Pierre Daubenton (1703–1776) was subdelegate for the *intendance* of Burgundy and a member of the well-known d'Aubenton familly of Montbard, which was closely allied with Georges Louis Leclerc, comte de Buffon, *intendant* of the Cabinet du roi, Paris. Pierre Daubenton's second cousin, Louis-Jean-Marie Daubenton (1716–1800), was Buffon's close collaborator at the Cabinet du roi, where he held the titles of *garde* and demonstrator. He collaborated with Buffon on the anatomical sections of the *Histoire naturelle* and authored several important articles on natural history for the *Encyclopédie*.

324. "Chably" is Chablis, a town not far from Dijon and Auxerre. *Bulbocastanum* is *Bunium bulbocastanum*.

325. The *Geranium grandiflorum* of Linnaeus is now *Grielum tenuifolium*. Many geraniums have been placed in *Pelargonium* and *Monosonia*, but without access to

Rousseau's actual sample, it is impossible to state the identity of his plant with certainty.

326. The reference is ambiguous: Rousseau could have met either Louis-Jean-Marie Daubenton, referred to above, or Edme-Louis (1732–1785), his second cousin, appointed in 1767 to the posts of sous-demonstrateur and garde at the Jardin du Roi. Edme-Louis Daubenton "seconded [Louis-Jean-Marie Daubenton] in all his undertakings." See Jussieu, 4.

327. At the invitation of Louis XV, Bernard de Jussieu laid out the Trianon garden at Versailles according to his natural method of plant families in 1759, which came to be known therefore as the "Trianon system." Claude Richard (1705–1784) was one of those to whom Jussieu dictated a description of his method in April 1759. See Jussieu, 11, n. 1; Stafleu 277–8. The Trianon garden was closed to the public and only open to courtiers or those, like Rousseau, who could gain special access. In 1775 Marie Antoinette had the garden rearranged as a *jardin à l'anglaise*, that is, a garden in the less formal English style.

328. Claude-Denis Cochin (1698–1786) held a number of important posts in the city of Paris, including that of *échevin*, or councillor. Cochin created a *jardin d'expériences*, or experimental garden at his property of Châtillon, near Montrouge in what is now the fourteenth arrondissement. Cochin was especially interested in rare and exotic plants. Louis-Antoine-Prosper Hérissant (1745–1769) compiled and Charles-Jacques-Louis Coquereau (1744–1796) published a catalog of his garden: *Jardin des curieux, ou catalogue raisonné des plantes le plus belles et les plus rares* (Paris, 1777). Leigh's version of these facts differs from the accounts on which we have relied in the following entries of *Dictionnaire de biographie Française*: "Cochin (Claude-Denis)," "Coquereau (Charles-Jacques-Louis)," and "Hérissant (Louis-Antoine-Prosper)."

329. Charles-Pierre Claret de Flerieu; see n. 319.

330. No printed version of this letter contains this name, which appears in the original, but was crossed out by another hand. According to Leigh, the person to whom Rousseau refers may have been Mme de Flerieu, sister-in-law of La Tourette, who played the role of Melanie in *Mélanie ou La Religieuse* by Jean-François de La Harpe (1739–1803). Rousseau attended a performance of this play in Lyon in June 1770.

331. "Be well and love me."

332. See n. 225.

333. This term refers to the nineteenth class in the Linnaean sexual system, which corresponds to the compositae (e.g. daisies) of the natural order. Rousseau discusses these composites in the sixth letter on botany to Mme Delessert.

334. The rest of this letter has no bearing on botany.

335. This is an old unit of measure of about eight-tenths of a liter.

336. *Plantago monanthos*, renamed *P. barbata*, is not a plant that Rousseau seems likely to have encountered; Jackson and Hooker state that Dumont d'Urville first identified it in the early nineteenth century in the Straits of Magellan. See *Mémoires de la Société linnéenne de Paris*, Vol. IV (1826): 606. Rousseau may have in mind Tournefort's *P. monanthos*, renamed *P. uniflora* by Linnaeus. See *Sp. pl.* 115 and n. 225.

337. "Nilotica" refers to the Nile; Rousseau seems to mean papyrus of the Nile.

338. Little is known about Jacques Robinet, whom Leigh, quoting Courtois,

reports as having been subdelegate of the *intendance* of Burgundy. See Leigh, Vol. XXXVIII, 40.

339. See n. 2 to p. 28 above, on Rozier.

340. Rousseau refers to the suppression of the *parlements* in 1771; Latourette was a member of the fiscal court of Lyon.

341. On Rozier, see n. 2 to p. 28 above.

342. Rousseau's term, *Caterve*, is attested in sixteenth-century French, but not in eighteenth-century French.

343. Rousseau has already alluded to his interest in this plant in his letter of 26 November 1770 to the same recipient.

344. Thouin (1747–1824) succeeded his father in 1764 as head gardener at the Jardin du Roi, Paris. In 1806 he became professeur de culture at the Jardin des plantes (successor institution to the Jardin du Roi). Thouin was part of a select coterie of botanists that included Rousseau: "During five of the last years of his life, [Rousseau] regularly attended special herborizations that M. de Jussieu the nephew held every week, in summer, with M. Thouin and a small number of friends or select students." See Jussieu, 13–14, n. 1.

345. *Lysimachia tenella* is now *Anagallis tenella*; *Peplis portula* is now *Lythrum portula*.

346. Camille Basset de Chateaubourg (1749–1803 was Latourette's grandson according to Leigh, Vol. XXXIX, 130, n. (c).

347. Chrétien-Guillaume de Lamoignon de Malesherbes (1721–1794) was an important official, a member of the *noblesse de robe* with strong sympathies for the philosophes. He was chief judge of the Paris fiscal court, the *Cour des aides*, and the author of its *Remonstrance* (1775), which sharply attacked the fiscal and juridical institutions of the *ancien regime*. Malesherbes was also the chief censor who protected the clandestine publication of the *Encyclopédie* of Diderot and d'Alembert and assisted Rousseau with the distribution of his works in France. He served as King Louis XVI's lawyer and was executed as a royalist during the Terror.

348. Rousseau refers to a small herbarium assembled from plants he collected together with Malesherbes at Meudon in the spring of 1771.

349. Rousseau's *jardins curieux* refer to gardens containing unusual, often imported, non-European species. The English phrase "curious gardens" is attested in a popular work, Philip Miller's *Gardener's Dictionary*, 1st ed. (London, 1731), s.v. "Iris."

350. For Dillenius, *Historia Muscorum*, see n. 000.

351. Species of Jungermannia, named for Ludwig Jungermann (d. 1653), formerly a genus of liverworts, are now divided among various genera of the family Jungermanniaceae. Liverworts are mosslike plants of the class Hepaticopsidia, of which the largest order is Jungermanniales, including 200 genera and 8,000 species. Rousseau implies that lichens are a kind of moss, but we now know lichens are symbioses of algae and fungus.

352. Rousseau refers to Vaillant's *Botanicon parisiense* (Leiden, 1723), a flora of the Paris region. See n. 33 for a full reference to Sébastien Vaillant (1669–1722). Rousseau refers again to Dillenius' *Historia muscorum*.

353. The term *moussier*, translated as "mossarium" by analogy to "herbarium," may be Rousseau's own neologism.

354. "Determination" means to identify the species to which a plant belongs.

355. In this context, Rousseau's *papier* seems to suggest "papyrus," that is, the plant from which he is sending a sprig to M. de Malesherbes.

356. See "Anthologie" pp. 100–101 for a full reference to Pontedera.

357. The German herbalist Joachim Camerarius the Younger (1534–1598) wrote *Hortus medicus et philosophicus* (Frankfurt am Main, 1588).

358. *Flora Prussica, sive plantae in regno Prussiae sponte nascentes, quarum Catalogum et Nomina* (Königsberg, 1703) was the work of the German botanist and professor of medicine Johannes Loesel (Loselius, 1607–1655) and a later editor Johann Gottsched.

359. Conrad Gessner (1516–65), Swiss naturalist and physician, wrote *De raris et admirandis herbis, quae . . . lunariae nominatur . . .* (Zürich, 1555). Leigh, XXXIX, 17, n. (d), gives the title as *De Herbis quae Lunariae nominantur*. See n. 000 on Gesner.

360. See n. 7 on Cesalpino and n. 281 on Columna. Robert Morison (1620–1683), botanist and physician to Charles II, became Oxford's first professor of botany in 1669. In *Plantarum historiae universalis oxoniensis*, 2 vols. (Oxford, 1680–1699), he examined the reproductive functions of fern spores. Leigh, XXXIX, 18, n. (g), lists this work as *Historia plantarum oxoniensis*, indicating only 1680 as the date of publication. Morison also produced *Hortus regius blesensis* (London, 1669), and *Plantarum umbelliferarum distributio nova* (Oxford, 1672). His *Praeludia botanica*, listed by Leigh as a discrete work, is actually the half-title of the *Hortus regius blesensis*.

361. See n. 238 on François Boissier de Sauvages de la Croix (1706–1767). Louis Gérard (1733–1819), a botanist and physician from Montpellier, was associated with leading Linnaeans of the day and corresponded with Linnaeus himself, but withheld unqualified acceptance of Linnaean systematics and nomenclature. In his *Flora Gallo-provincialis* (Paris, 1761), he did not use binomial names and began with the so-called lower, nonflowering plants—fungi, algae, and ferns (of special interest to Rousseau)—rather than with the higher, that is, flowering, plants. For Guettard, see n. 93.

Thomas François d'Alibard or Dalibard (1703–1779) succeeded Rousseau as cashier in the Dupin household and authored perhaps the first Linnaean work in France, *Florae parisiensis prodromus, ou Catalogue des plantes qui naissent dans les environs de Paris, rapportés sous les dénominations modernes & anciennes, & arrangées suivant la méthode séxuelle de M. Linnaeus. Avec l'explication de tous les termes de la nouvelle nomenclature* (Paris, 1749). He also translated Benjamin Franklin's treatise on electricity into French. Rousseau refers to d'Alibard in the *Confessions*, Book VIII, Pléiade, I, 364, and in the *Fragments of Botany*, p. 254 below.

362. Rousseau refers to Bernard de Jussieu and his nephew, Antoine-Laurent de Jussieu. See Rousseau's Introduction. In his *Mémoirs secrets*, Louis Bachaumont confirms that Rousseau's presence at an herborization on 26 July 1771 "made the crowd very large"; this "celebrated student" had "developed profound knowledge of this art. He asked many questions of the demonstrator and in his turn . . . astounded the sieur de Jussieu with the acuteness and precision of his responses." See Bachaumont, Vol. V (London, 1784), 140–141. *Lysimachia tenella* is now classified as *Anagallis tenella*.

363. See n. 336 regarding this identification.

364. Rousseau refers to the *Agrostographie helveticae prodromus* (Zürich, 1708)

of Johannes Scheuchzer (1684–1738). This work treats agrostology, or the study of grasses. Scheuchzer was a physician and botanist in Zürich; his older brother, Johann Jakob (referred to below) was likewise an important botanist and naturalist.

365. See "Anthologie" on pp. 100–101.

366. Rousseau refers to Dillenius' *Historia muscorum* (Oxford, 1741). To my knowledge there is no French translation of this work, although there is an English one. The English translation first appeared in 1763, and was subtitled *A general history of land, water, &c., mosses and corals, containing all known species* . . . . A second edition was published in 1768.

367. "But up to his point it was necessary for a great architect to construct so great an edifice to which all-governing providence at last gave birth at the end of the seventeenth century in the great Tournefort: this man that adorned with the highest wisdom the genuine method for distinguishing the flowers by classes, differentiating the true fruit by orders. Truly great are those things which providence has ordered into being &c." Carolus Linnaeus, *Reformatio Botanices* (Uppsala, 1762), 4. The student who defended this dissertation was J. M. Restelius. See Stearn, "The *Amoenitates academicae* and the authorship of Linnaean Dissertations," *Sp. pl.*, 59. Leigh, Vol. XXXIX, 49, mistakenly states that this dissertation, *Reformatio Botanices*, "is not by Linnaeus." Rousseau is completely correct in viewing this dissertation as a work of the master himself. See n. 17 above for a discussion of the authorship and significance of this dissertation.

368. Leroux de Saint-Remi (1732–1800) was intendant and bursar of the salt granary of Malesherbes.

369. A reference to the *Botanicon parisiense* of Sébastian Vaillant.

370. Björnstall (1731–1779) became professor of philosophy at Uppsala in 1776 and in 1779 professor of oriental languages.

371. Björnstall means Antoine-Laurent de Jussieu.

372. According to his letter of 22 October 1773, Rousseau received a reply to this letter, but he never read it, having arranged to dispose of all letters on which unknown handwriting appeared. He attempted to reclaim Linnaeus' letter, but without success, even though he "employed for this purpose the credit of someone who had much in the postal service." See Leigh, Vol. XXXXI, 203.

373. Rousseau uses the term *feuillet*, meaning both page and leaf.

374. This, according to Leigh, is *galé*, or *Myrica gale*, a species of the widely distributed genus of aromatic shrubs in the Myricaceae.

375. Rey (1720–1780), a fellow Genevan, was Rousseau's publisher in Amsterdam. Portions of this letter have been omitted as having no bearing on botany.

376. Rousseau's comment is apt. Botanical gardens in the Netherlands pioneered the transplantation of non-European species; Clusius (see above, n. 7), creator of the garden at Leiden, introduced the tulip, potato, and chestnut to Europe in the sixteenth century. In 1706, the Amsterdam garden boasted the first coffee plant grown in Europe and was a principal source of coffee plants transplanted throughout the Dutch colonies. Linnaeus featured many non-European species in his *Hortus Cliffortianus* (Amsterdam, 1737), the description of the gardens of his Anglo-Dutch patron Sir George Clifford. Rousseau's interest in "foreign plants" is noteworthy, given his oft-expressed rejection of the study of exotic flora and his critique of "exotic botany" in "Vivace."

377. This list details books Rousseau hoped to aquire. The abbreviations f°, 4° and 8° refer, respectively, to folio, quarto and octavo formats. (These abbreviations sometimes appear in modern publications as fol., 4to and 8vo.) According to Diehl, "these formats indicate the number of times a printer's sheet, or book section, has to be folded. A folio sheet is folded once, a quarto twice, an octavo three times. . . ." See Diehl, Vol. 2, 62. Also of assistance was Kathleen Coleridge, Librarian, Beaglehole Rare Book Collection, Victoria University of Wellington, Wellington, New Zealand. Note that folio editions were the largest, most luxurious, and most costly books of the day, while octavos (one-quarter the size of folios) were the least expensive. Rousseau therefore wished to acquire some comparatively expensive works, with only the Linnaean ones being octavos.

378. Rembert(us) Dodoens (1517–1585) studied medicine at universities throughout western Europe and became court physician in Vienna (1574). He later became a professor of medicine at Leiden (1582). His *Stirpium historiae pemptades sex. sive libri xxx* (Antwerp, 1583) was a Latin version of the same author's *Cruydeboeck* (Antwerp, 1554), an herbal in Flemish. The *Pemptades* provides a glossary of botanical terms, which is perhaps why Rousseau wanted it, but this glossary does not compare favorably with, say, the work of Clusius, also included on this list. See Arber, 155.

379. According to Stafleu and Cowan, Matthias de L'Obel (Lobel or Lobelius) (1538–1616) was not the author of this anonymous work, *Plantarum seu stirpium icones*, 2 vols. in quarto (Antwerp, 1581). Like Rousseau, Leigh relies on a now-outdated attribution, Vol. XXXIV, 269, n. (g).

380. Jakob Dietrich (Theodorus) of Bergzabern, better known as Tabernaemontanus (1520?–1590), a German herbalist and physician, produced his *Neuw Kreuterbuch* (Frankfurt am Main, 1588, 1591) separately from the illustrations, which appeared in *Eicones plantarum seu stirpium* (Frankfurt am Main, 1590). The woodcut illustrations of 3,000 plants came from the texts of Bock, Fuchs, Mattioli, Dodoens, Clusius, and l'Obel. They also illustrated the first edition of John Gerard's *Herball* (1597).

381. Johann Jakob Scheuchzer (1672–1733; not to be confused with his brother, Johannes, 1684–1738 [see n. 364], or the latter's son, also Johannes) was a Swiss naturalist, physician, and historian. He explored the Swiss Alps and established the sciences of paleobotany and paleontology. It is not clear which of his works Rousseau has in mind; likely possibilities are *Curesiphites Helveticus, sive Itinera per Helvetiae Alpinae Regiones facta annis MDCCII . . . MCCCXI* (Leiden, 1723) or *Curesiphites helveticus, sive Itinera alpina tria* (London, 1708).

382. See n. 24 for a discussion of Albrecht von Haller.

383. *Iter Helveticum anni 1739* (Göttingen, 1740) is one of Haller's important contrbutions to the study of Swiss botany. Rousseau refers to Robert Morison's *Plantarum umbelliferarum distributio nova* (Oxford, 1672). See n. 360.

384. See n. 358 on *Flora Prussica* (Königsberg, 1703).

385. Rousseau seeks *Rariorum plantarum historia* (Antwerp, 1601) of Carolus Clusius (Charles de l'Ecluse). See p. 246 above.

386. The *Philosophia Botanica* (Stockholm, 1751) of Linnaeus is a development of part of his *Fundamenta Botanica* (Amsterdam, 1736).

387. See p. 96 above.

388. *Oländska och Gothländska Resa* (Stockholm and Uppsala, 1745), a description of Linnaeus' expeditions to Öland and Gotland in 1741, contained the first use of binomial nomenclature and is central to the development of Linnaean nomenclature. See Jerry Stannard, "Linnaeus, Nomenclator Historicusque Neoclassicus," in J. Weinstock, ed., *Contemporary Perspectives on Linnaeus* (Lanham, Md.: University Press of America, 1985), 31.

389. Pierre Guy (1715–1795), was the largely silent partner of Rousseau's Paris publisher, Nicolas-Bonaventure Duchesne. Guy first appears among Rousseau's correspondents with a lettter from Rousseau of 6 January 1762. In 1760 Guy approached Marc-Michel Rey (see n. 375) with the idea of collaborating in the publication of "the Novel of Rousseau," namely, *Julie, or The New Heloise* (*Collected Writings*, Vol. 6). Guy "was to gain Rousseau's confidence and to become in a way his regular second editor." Leigh, Vol. VII, 383.

390. See n. 377. According to Dufour, the numbers in the right-hand column were prices inserted by Guy; those in the left-hand column were inserted by another hand. See Théophile Dufour, *Correspondance générale de J.-J. Rousseau*, Vol. 17 (Paris, 1932), 353, n. 1. Note that the price for Dillenius is comparatively high; while Rousseau does not specify the edition he sought, only 250 copies of the Latin quarto edition of 1741 were printed, which might account for its comparatively high price.

391. That is, the anonymous *Plantarum seu stirpium icones*, previously attributed to Dodoens. See Rousseau's letter to Rey on p. 246 above.

392. This would have been an extremely generous gift. See Rousseau's Introduction (p. 99) for an earlier reference to Rumphius and to this important work.

393. Little is known about the abbé de Pramont (d. 1786). His name does not figure in any of the Grandes Biographies of the nineteenthth century or in any of the dictionaries where one might expect to find him. He was vicar of Viviers in the Ardèche, but the local archives likewise yield no information about him. Pramont was interested in natural science and music and brought Rousseau music to copy; he owned a first edition of Rousseau's *Dictionnnaire de Musique*. Apart from this brief correspondence, there is no evidence that he exchanged any other letters with Rousseau.

394. Rousseau is returning Pramont's copy of a lavish folio work, *La Botanique mise à la portée de tout le monde, ou Collection des plantes d'usage dans la médecine, dans les aliments et dans les arts . . .*, 2 vols. (Paris, 1774) by Nicolas-François (1746–1810) and Geneviève de Nangis Regnault (1746–1802). Rousseau made extensive annotations in Pramont's copy; these annotations were published as "Notes inédites de J. J. Rousseau sur l'ouvrage intitulé 'La Botanique mise à la portée de tout le monde . . .'" by V. D. Musset-Pathay in *Œuvres inédites de J.J. Rousseau*, Vol. I (Paris, 1825), 285–372. Rousseau refers to a table he drew up of 349 plants found therein; he arranged this table according to the Linnaean system. His annotations were highly critical of the botanical information contained in the work. See also Henry Cheyron, "L'Amour de la Botanique: Les Annotations de Jean-Jacques Rousseau sur la Botanique de Regnault," *Littératures* 4 (Autumn 1981), 85, n. 13.

395. This postscript to the preceding letter concerns the Abbé de Pramont's copy of the Regnaults' *La Botanique*, which Rousseau borrowed and annotated. As Pramont's copy was still unbound, Rousseau addresses problems associated with

its subsequently being bound. The process Rousseau describes here appears to be that of "guarding," a procedure allowing loose pages and large plates to be inserted individually into a binding. See Diehl, Vol. 2, pp. 36–53. Rousseau seems to believe he has facilitated the binding of the Abbé's unbound book. As an experienced music copyist and herbarium-maker, Rousseau was conversant with bookbinding methods.

396. *Expérience* means both experience and experiment; in this context, the latter sense seems most fitting. Rousseau may have in mind the "chemical analysis" by distillation of plants in the Royal Academy of Science's failed project to produce a natural history of plants. See Stroup, 89–102.

397. The meaning of "empiric" in eighteenth-century parlance is a bit ambiguous, although generally pejorative. According to the 1694 *Dictionnaire de l'Académie française*, an empiric "is attached to some particular experiments in Medicine, rather than to the usual method of the Art." Littré states that it is one who "treats maladies with secret remedies and without any scientific notion of the body and its maladies."

398. Pléiade writes *Arum* for a genus that is most likely "*Arum*." "Good-King-Henry," the name closest to Rousseau's "bon Henri," is also known as "wild spinach," but this is a species of Cheropodium.

399. The reference is to Vol. I., p. 154 of *Le Botaniste françois, comprenant toutes les plantes communes & usuelles, diposées suivant une nouvelle méthode, & décrites en langue vulgaire*, 2 vols. (Paris, 1767), by Jacques Barbeu Du Bourg (1709–1779). The second volume contains a "Manuel d'herborisation." On p. 154 of vol. I we read, "If botanists would all agree with one of their greatest Masters, to repeat without ceasing the name of Prunus Cerasus, in order to designate the tree which bears Cherries, the Public would never go along with saying that it is a Plum Cherry tree." Barbeu Du Bourg (1709–1779) was a French physician, writer on medical and political topics, and friend of Benjamin Franklin, whose works he published in 1773. According to the *Dictionnaire de biographie française*, Barbeu Du Bourg, an "amateur botanist, friend of [Bernard de] Jussieu, published the result of his observations in a manual for the use of people of fashion . . . in imitation of Adanson and Tournefort, in which he had especially the merit of expressing himself in French." Jean-Marc Drouin of the Natural History Museum, Paris, provided valuable assistance in locating Rousseau's reference.

400. Vetch flower *vicia sepium*. See *Sp. pl.*, 737.

401. The meaning of *stil*, or *style*, is unclear; it could refer to a kind of grain. *Style* also has a strictly botanical meaning as "part of the pistil," but that seems less likely in this context.

402. See n. 371.

403. Presumably Rousseau means John Ray, the English botanist. See n. 12.

404. See n. 62.

405. The spelling should be *Myosotis scorpioides*.

LETTER TO FRANQUIÈRES

1. First published in the *Œuvres posthumes de Jean-Jacques Rousseau* (Neuchâtel, chez Samuel Fauché, 1782), this letter was apparently intended by Rousseau to ap-

pear in the edition of his collected writings. Although the original letter is lost, the Bibliothèque de la Ville de Neuchâtel possesses a manuscript copy (Lettres de J.-J. Rousseau, A-H, MsR 283, f. 149–154) written partly in Rousseau's hand and partly in the hand of a secretary, with corrections inserted by Rousseau. Early editions did not identify the addressee of the letter, and until the edition by Pierre-Maurice Masson in 1914 (*La Profession de Foi du Vicaire Savoyard*, App. V, 513–526), all earlier publications relied on the faulty 1782 edition. Ralph Leigh, in his critical edition of the *Correspondance complète de Jean-Jacques Rousseau* (The Voltaire Foundation, Oxford, 1980), Tome XXXVII, 13–27, identifies the addressee for the first time as Laurent Aymon de Franquières (1744–1790), a young nobleman from the Dauphiné who, following the family tradition, was received as a member of the council to the Parlement of Grenoble in 1766, but apparently without ever actually assuming the duties of this office. Traveling often, he is reported as visiting Voltaire at Ferney, near Geneva, in 1771.

2. Upon returning to France from England in 1767, Rousseau was still under a mandate of arrest for the publication of *Emile* and the *Social Contract*. Advised by his friend the Prince de Conti to live under an assumed name, Rousseau took the name of Renou (Letter to the Marquis de Mirabeau, June 24, 1767, in Leigh, Vol. 33, 170–171). In 1770 Rousseau was again allowed to live openly in Paris, on the condition that he no longer publish on religion or politics.

3. Compare the beginning of the "Profession of Faith of the Savoyard Vicar" in *Emile*, Bloom edition, 266.

4. Compare *Reveries*, Eighth Walk, p. 77 above.

5. Thirty years before writing this letter Rousseau had not yet left Chambéry for Paris and would have been approximately the same age as Franquières. Rousseau thus disregards the "vision of Vincennes" (1749), which he describes elsewhere as the decisive moment shaping his life and thought. See Rousseau's "Letter to Malesherbes," January 12, 1762, in *Collected Writings*, Vol. 5, 575–576; and *Confessions*, Book VIII, *Collected Writings*, Vol. 5, 294–295.

6. For an example of this sort of discussion, see Diderot, *Pensées Philosophiques*, XVIII and XXI.

7. On Samuel Clarke (1675–1729), see *Emile*, Bloom edition, 269, and Roger Masters, "Rousseau and the Illustrious Clarke," in Michel Launay, *Jean-Jacques Rousseau et son temps* (Paris: Librairie A.-G. Nizet, 1969), 37–50. Author of the *Discourses Concerning the Being and the Attributes of God* (1706), Clarke was a friend and follower of Newton, but a critic of Locke and of materialism. See also *The Leibniz–Clarke Correspondence*, H. G. Alexander ed. (New York: Barnes & Noble, 1978).

8. See Locke's discussion in the *Essay Concerning Human Understanding*, IV.3, sec. 6. The possibility of accounting for thought in terms of the explanation of matter and the laws of necessary motion was a central issue of the Enlightenment. See also Voltaire, *Lettres anglaises*, XIII. Rousseau addresses the issue concisely in the first draft of *Emile* (Manuscript Favre, Pléiade, IV, 217–220) and extensively throughout the final version.

9. The capitalization of *supreme* appears in the manuscript but not in the Pléiade edition. While the word "notion" appears as plural in the Pléiade, it appears as singular but incorrectly as masculine and with plural adjectives in the manuscript: "*au notion confuses mais Sures de l'être Suprême*."

10. On this point compare Nietzsche, *Beyond Good and Evil*, aph. 6.

11. *Discourse on the Origins of Inequality*, *Collected Writings*, Vol. 3, 79–80; *Reveries*, pp. 49–63 and 69–71 above; and *Emile*, Bloom edition, 105n.

12. See *Emile*, Bloom edition, 166–171, and *Discourse on the Sciences and Arts*, *Collected Writings*, Vol. 2, 6–7, 13, 20–22. Compare here the radical difference not only between Rousseau and the *Encyclopédistes*, but also between Rousseau and Socrates, Plato, or Aristotle on the status of philosophy for human well-being. See Plato, *Symposium*, 201d–212c; *Apology of Socrates*, 30a–b, 33b–d, 36b–e; Aristotle, *Nicomachean Ethics*, 1166a20–25, 1177b27–1178a8, 1179a23–33.

13. This follows the punctuation of the manuscript, which differs from the Pléiade. The expression *Etre immense* also appears in the "Profession of Faith" (*Emile*, Bloom edition, 285) and seems to refer to Descartes' usage in *Meditations* III and IV, just as the preceding sentence refers to the mind–body distinction in Descartes' *Meditations* II and VI and in his *Discourse on Method*, IV.

14. Psalm XVIII.2 in the Vulgate edition, or XIX.1 in recent editions. Beginning with "The heavens declare the glory of God, and the firmament announces the work of His hands," the psalm celebrates the creator of the heavens, the sun and the divine law.

15. The capitalization is in the manuscript, but not in the Pléiade.

16. On the interior assent, a leitmotif in Rousseau's writings, see *Dialogues*, *Collected Writings*, Vol. 1, 22, 214; *Reveries*, pp. 23 and 31 above; and compare with *Confessions* IX, *Collected Writings*, Vol. 5, 393. Concerning self-analysis, and not history, as the basis for discovering the natural sentiments, see *Confessions*, *Collected Writings*, Vol. 5, 5; *Dialogues*, *Collected Writings*, Vol. 1, 52–53 and 215, and *Reveries*, Fifth Walk, in comparison with *Reveries*, Third Walk, and the "Profession of Faith of the Savoyard Vicar" in *Emile*, Book IV.

17. On the *dictamen*, see *Reveries*, p. 31 above. Spinoza uses this term to designate an imperative of reason in the *Theological-Political Treatise*, ch. XVI, and in the *Ethics*, IV, Proposition XVIII, scholia and Proposition LXVII, demonstration.

18. See Aristotle, *Physics*, 239b5 and 263a5, on Zeno the Eleatic.

19. On the pyrrhonists, see *Discourse on the Sciences and the Arts*, *Collected Writings*, Vol. 2, 6.

20. Rousseau alludes to Bishop Berkeley on this issue in the *First Discourse*, *Collected Writings*, Vol. 2, 20. See *Emile*, Bloom edition, 270, for the Vicar's critique of both idealism and materialism. The problem of refuting Berkeley is raised by Diderot in his *Lettre sur les Aveugles*, which induced Condillac to attempt to resolve it from the standpoint of materialism in his *Traité des Sensations*. As a work of genetic epistemology, Rousseau's *Emile* is in large part a response to the materialism of his friend Condillac, of Helvétius, and of early modern philosophy in general.

21. See Diderot, *Pensées Philosophiques*, sec. XXI. Diderot concludes, however, by saying, "I would well beware of making this argument to an atheist. . . . (T)he difficulty of the event is compensated more than enough by the multitude of throws." Rousseau's Vicar answers this point in *Emile*, Bloom edition, 276. Rousseau gives a more nuanced statement in the letter to Voltaire of August 18, 1756, *Collected Writings*, Vol. 3, 118. He also raises the issue in the "Morceau allégorique," Pléiade, IV, 1046.

22. In his edition of the "Letter to Franquières" in *The Social Contract and Other Later Political Writings* (Cambridge: Cambridge University Press, 1997), 321, Victor Gourevitch identifies Rousseau's allusion to the Epicurean view of the soul as made of atoms as referring to Lucretius, *De Rerum Natura*, III.161–257. The discussion there of heat to explain the soul bears comparison with not only Descartes, *Discours de la Méthode*, V, but also *Emile*, Bloom edition, 106 and 232. See Manuscrit Favre, Pléiade, IV, 219–220. Gourevitch also points out that the Modernist to whom Rousseau refers concerning organic molecules is Buffon. See Georges-Louis Leclerc, Comte de Buffon, *Histoire Naturelle Générale et Particulière*, chs. 2–4.

23. Rousseau also discusses the problem of the origin of evil in the "Letter to Voltaire," *Collected Writings*, Vol. 3, 114–115. In the "Letter to Beaumont" he rejects the Christian doctrine of original sin as providing an adequate account. See Pléiade, IV, 935–938. Compare Descartes, *Meditations*, IV.

24. This is capitalized in the manuscript, but not in the Pléiade. The next occurrence of "author" is not capitalized in either.

25. On the natural experiences of suffering and death, see *Second Discourse*, *Collected Writings*, Vol. 3, 27–28; "Letter to Voltaire", *Collected Writings*, Vol. 3, 109–110; *Emile*, Bloom edition, 54.

26. See Voltaire, *Candide*, III.

27. François de Salignac de La Mothe-Fénelon (1651–1715), Archbishop of Cambrai and preceptor of the Duke of Burgundy, the grandson of Louis XIV and heir to the throne, had written *Les Aventures de Télémaque* for his royal pupil with a view to fundamental reforms of the monarchy. A critic of epicureanism and a disciple of Bossuet until their dispute over Quietism, Fénelon endured political disgrace as a result of his religious and political views. For Rousseau's appreciation of Fénelon, see *Dialogues*, *Collected Writings*, Vol. 1, 158; *Reveries*, p. 19 above, and *Julie*, II.xviii, *Collected Writings*, Vol. 6, 212, where he is described, with Catinat, as one of "the two greatest, the two most virtuous moderns." On Socrates and Cato, see *Discourse on Political Economy*, *Collected Writings*, Vol. 3, 151; *Discourse on the Virtue of the Hero*, *Collected Writings*, Vol. 4, 2 and 6; and the fragments comparing Socrates and Cato, *Collected Writings*, Vol. 4, 14–15. For a discussion of Rousseau's comparison of Socrates and Cato, see Christopher Kelly, *Rousseau's Exemplary Life: The "Confessions" as Political Philosophy* (Ithaca: Cornell University Press, 1987), 50–75.

28. Rousseau's specific examination of this question begins with the *Discourse on the Origins of Inequality* and continues through his epistolary exchanges with Voltaire, notably in Rousseau's Letter to Voltaire of 18 August 1756 and culminates with Rousseau's answer to Voltaire's *Candide* with the publication of *Emile* in 1762.

29. On the two principles, see Rousseau's remarks on Manichaeism in the *Lettre to Beaumont*, Pléiade, IV, 955–957, and compare these texts with Leibniz's animadversions on Pierre Bayle on the same point, or on Zoroaster, in the *Essais de Théodicée*, II, sec. 135, in the "Essays on the Justice of God and the Freedom of Man in the Origin of Evil." Compare Rousseau's criticism of Bayle at the end of "The Profession of Faith of the Savoyard Vicar," in *Emile*, Bloom edition, 312–314.

30. The word here in French is "*pondérant*," deriving from the Latin "ponderare," which means to weigh, balance, or equilibrate. Giving Rousseau's text as the only example of the use of "pondérant," the Littré *Dictionnaire de la Langue*

Française suggests that Rousseau uses this word here to mean "important" or "decisive" and adds that "cela n'est pas usité." In fact, as is noted by the Littré, all other usages by Rousseau of variants of "pondérer" refer to weighing or equilibria. It seems that Rousseau has in mind the different premises of Franquières, as a disciple of Diderot, who would not normally give "weight" to Rousseau's sentiment. Here Rousseau is suggesting that despite the lack of weight Franquières would normally grant to Rousseau's sentiments, in this instance, considering Rousseau's fate and sufferings. Franquières might consider as weighty Rousseau's "optimistic" sensibility, or his happiness in spite of adversity.

31. Compare *Emile*, Bloom edition, 444–445, with "The Profession of Faith," where the Vicar obscures the distinction between virtue and goodness. See also *Dialogues*, *Collected Writings*, Vol. 1, 147–148, 157–159, and compare Aristotle's different argument in *Nicomachean Ethics*, I, VII, and X, on virtue and taking pleasure in the noble.

32. Rousseau uses the word *force*, translated here as "strength." The French term, however, draws attention to questions of natural philosophy, just as the idea of "virtue" in Rousseau points to questions of alienation from nature. For discussions of strength of soul in Rousseau, see *Discourse on the Virtue of a Hero*, *Collected Writings*, Vol. 4, 1–12; *Emile*, Bloom edition, 444–445; and "Final Reply," *Collected Writings*, Vol. 2, 111.

33. Racine's tragedy *Berenice*, discussed by Rousseau in the *Letter to d'Alembert*, portrays the conflict between the Roman Emperor Titus' love for the daughter of Herod and his duty as Emperor, compelling him to overcome his love for a foreigner. Lucius Junius Brutus, founder of the Roman Republic after the death of Lucretia and the expulsion of the Tarquins in 509 B.C.E., presided over the trial and execution of his own sons, who had conspired to restore the royal authority. See "Political Fragments," *Collected Writings*, Vol. 4, 38–39. Brutus and Titus are both discussed in the "Final Reply," *Collected Writings*, Vol. 2, 123. Rousseau's discussions should be compared with those of Machiavelli (*Discourses on Livy*, III.3) and St. Augustine (*City of God*, III.xvi, and V.xviii).

34. The infinitive *disputer*, which Rousseau uses here, has both an eristic and a poetic implication. In French medieval literature the *dispute* or *débat* is a metrical composition in dialogue form involving personifications and often dealing with religious themes. Consider Marivaux's *La Dispute* (1742) and its relation to Rousseau's play *Narcisse*, to which Rousseau alludes in *Confessions* VII, *Collected Writings*, Vol. 5, 241–242. The situation described here is reminiscent of Part II of *Julie* and Rousseau's unfinished play, *The Death of Lucretia*. As his remark immediately below suggests, it is also connected to his own love for Sophie d'Houdetot, described in Book IX of the *Confessions*. See, in particular, *Collected Writings*, Vol. 5, 368–381.

35. Genesis XXXIX, 12–20. Slave of Potiphar, who was eunuch to the Pharaoh and provost of the palace, Joseph fled Potiphar's wife when she sought to seduce him, and upon fleeing left his cloak. Infuriated at his rejection, Potiphar's wife accused Joseph of attempted rape and offered his cloak as proof, for which Joseph was punished by imprisonment.

36. This passage is a reference to Rousseau's dispute with Diderot concerning the problematic basis of morality. See *Collected Writings*, Vol. 3, 135–139, and Vol. 4, 76–82; also *Emile*, Bloom edition, 105n, 193, 235–236, 291, and 314.

37. See *Emile*, Bloom edition, 40, and *Reveries*, p. 51 above.

38. This passage occurs in Plato, *Republic*, II, 359b–362c, in a speech by Glaucon. See also 368b in relation to 330d–331d and 608c–621d. Socrates' later appeal in Book X to the hope for rewards after death conflicts with the task Glaucon had imposed on him in Book II, just as Rousseau's appeal to this hope in his religious writings conflicts with his portrait elsewhere of the happiness in this life of the natural man. But whereas Socrates' alternative appeal points to the *telos* of philosophy, Rousseau's alternative appeal betokens the sentiment of existence. Compare *Second Discourse*, *Collected Writings*, Vol. 3, 79–80; *Emile*, Bloom edition, 40 and 105n; *Reveries*, p. 55 above. See also *On Theatrical Imitation*, *Collected Writings*, Vol. 7, 337–350, where Rousseau considers the exchange between Socrates and Glaucon in *Republic* X in the context of the quarrel between philosophy and poetry.

39. Compare Rousseau's "Letter to Voltaire," *Collected Writings*, Vol. 3, 120, and 197, n. 44; *Emile*, Bloom edition, 292 and 314; and, for a different view, *Reveries*, p. 55 above.

40. Just as elsewhere Rousseau draws parallels between Socrates and Cato, his religious writings emphasize the parallel between Socrates and Jesus. Proceeding in this way, however, he transforms the classical tension between Jerusalem and Athens in the Western tradition and obscures these origins in favor of an idea of natural religion that, paradoxically, is consistent with the requirement of alienating the citizen from his nature. For another version of the parallel, see *Emile*, Bloom edition, 304–308.

41. In the manuscript Rousseau wrote "the first," but all editors agree that he clearly means Socrates.

42. These remarks warrant comparison with Rousseau's defense of the Jews against their persecutors in *Emile*, Bloom edition, 303. See the section of the "Political Fragments" called "About the Jews," *Collected Writings*, Vol. 4, 33–35.

43. In the *Social Contract*, IV.8, Rousseau examines the theological-political problem arising from this universalism. *Collected Writings*, Vol. 4, 216–224.

44. For Rousseau's account of the disciples and their role in the spread of Christianity, see "Observations by Jean-Jacques Rousseau of Geneva," *Collected Writings*, Vol. 2, 45.

45. See *Letters Written from the Mountain* III, Pléiade, Vol. III, 730–750. On "the true miracle" of the founding legislator's great soul, see *ibid.*, 727–728; the *Social Contract, First Version*, II.2, *Collected Writings*, Vol. 4, 103; and *Social Contract*, II.7, *Collected Writings*, Vol. 4, 157.

46. At the time he wrote this letter Rousseau had been suffering accutely for months from a severe stomach swelling as well as from a painful blockage of the urethra; he was being vigorously pursued by friends of Voltaire in a lawsuit for nonpayment of a large debt he firmly denied ever contracting; and he was forced to live clandestinely, under an assumed name, while under a warrant for arrest by the Parlement of Paris. See his correspondence with Du Peyrou, beginning with his letter of September 9, 1768, through his letter to Moultou of February 14, 1769. On his isolation, see *Reveries*, pp. 70–72, in relation to pp. 95–97 above.

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